

TARIFF COMMISSION
GOVERNMENT OF INDIA



REPORT
ON THE
CONTINUANCE OF PROTECTION
TO
THE SERICULTURE INDUSTRY

BOMBAY
1969

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GOVERNMENT OF INDIA



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TABLE OF CONTENTS

PARAGRAPH No.		PAGE No.
1	Main findings	1
2	Previous tariff inquiries	2
3	Present inquiry	2
4	Method of inquiry	3
5	Scope of the inquiry	3
6	Implementation of the Commission's ancillary recommendations	3
7	Other investigations after 1966 affecting the industry	8
8	Progress and present position of the industry	10
9	Domestic demand and availability	44
10	Standards, quality and testing	48
11	Research and training	49
12	Selling prices	50
13	Import control policy and imports	54
14	Export assistance and exports	56
15	Import duties	61
16	C. i. f. prices	63
17	Commission's estimates of cost of production and fair ex-works prices	63
18	Comparison of landed cost without duty of imported raw silk with estimated fair ex-works prices of indigenous raw silk	65
19	Measure of protection	66
20	Summary of conclusions and Recommendations	68
21	Acknowledgements	72

LIST OF TABLES

Sl. No.	Table No.	Contents	Page No.
1	6·1	Consumption of silk waste by Assam Spun Silk Mills	6
2	8·1	World production of mulberry raw silk	10
3	8·2	Share of States in the indigenous production of silk	11
4	8·3	Production of raw silk—progressive increase	12
5	8·4	Mulberry cultivation in Mysore	13
6	8·5	Mulberry cultivation in West Bengal	14
7	8·6	Area, yield and cost of leaves in Mysore and West Bengal for 1968	15
8	8·7	Mulberry yield and cost	18
9	8·8	Production of layings in Mysore	20
10	8·9	Production of layings in West Bengal	20
11	8·10	Comparison of layings used	21
12	8·11	Laying used in Jammu & Kashmir	22
13	8·12	Raw Silk produced in Jammu and Kashmir	22
14	8·13	Use of layings and production compared	23
15	8·14	Layings used for non-mulberry silk	24
16	8·15	Cost of cocoons in Jammu & Kashmir	26
17	8·16	Raw silk production	27
18	8·17	Filature production	28
19	8·18	Renditta obtained at Mysore Filatures	29
20	8·19	Production of cottage basins and charkha	29
21	8·20	Total production of raw silk	30
22	8·21	Raw silk production in Jammu and Kashmir	31
23	8·22	Non-mulberry silk production	36
24	8·23	Production of silk waste	37
25	8·24	Exports of silk waste	38
26	8·25	Prices of spun year and noil yarn	38

Sl. No.	Table No.	Contents	Page No.
27	8.26	Capacity and production of spinning factories	39
28	8.27	Utilisation of silk waste by factories	40
29	8.28	Export and indigenous use of silk waste	41
30	8.29	Plan allocation and utilisation by States	43
31	8.30	Central schemes allocation and utilisation.	44
32	9.1	World production of textile fibres	45
33	9.2	Domestic production of textile fibres	45
34	9.3	Shift from silk to nylon, hosiery	46
35	9.4	Comparative prices of textile fibres	46
36	9.5	Availability of raw silk	47
37	12.1	Selling prices of cocoons	50
38	12.2	Prices of filature silk	51
39	12.3	Raw silk prices of cottage basins and charkha	52
40	12.4	Non-mulberry silk prices	52
41	12.5	Spun silk yarn and noil yarn prices of Government Spun Silk Mills, Channapatna	53
42	12.6	Prices of mulberry yarn, eri yarn and muga yarn of Assam Spun Silk Mills Ltd., Jaggi Road	53
43	13.1	Import of raw silk	54
44	13.2	Import of seed	54
45	14.1	Exports of fabrics	57
46	14.2	Exports to traditional and non-traditional markets	58
47	14.3	Exports by variety of fabrics	59
48	14.4	Exports of tasar fabrics	60
49	15.1	Rates of import duty	61
50	16.1	C. i. f. prices	63
51	17.1	Commissions' estimates of fair ex-works prices	64
52	18.1	C. i. f. price and the difference in the fair price of indigenous raw silk	66

APPENDICES

Appendix No.	Contents	Page No.
1	List of associations/firms/and other bodies to whom the Commission's questionnaires/letters were issued and those who replied	73
2	List of persons who attended the Committee's Public Inquiry on 22nd August, 1969	105
3	Statewise particulars of area under mulberry trees and number of trees used for rearing for the years 1966, 1967 and 1968	107
4	Statewise production of different varieties of silk for the years 1966, 1967 and 1968	108
5	Statewise production of non-mulberry silk for the years 1966, 1967 and 1968	110
6	Statewise production of mulberry and waste for the years 1966, 1967 and 1968	111
7	Statewise allocation of and expenditure under the Third Five Year Plan	114
8	Statement showing countrywise exports of mulberry silk fabrics for the years 1966, 1967 and 1968	118

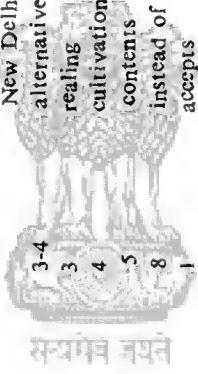


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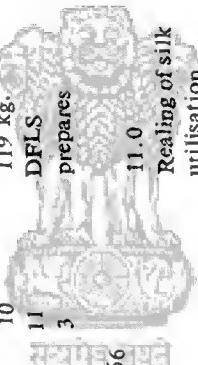
ERRATA

TO

REPORT ON THE CONTINUANCE OF PROTECTION TO THE SERICULTURE INDUSTRY (1959)

	Page	Para/Table/Item No.	Line	For	Read
<i>Resolution</i>					
i		Date	New Delhi	New Delhi	
i		Item (1)	alternative	alternate	
ii		Item (6)	reeling	reeling	
ii		Item (9)	cultivation	cultivation	
ii		Item (9)	contents	content	
ii		Para 2	instead of	Instead of the	
iii		Para 5	accepts	accept	
<i>Contents</i>	iii	Sl. No. 34 Item 9.3	nylon, hosiery	nylon for hosiery	
<i>Report</i>					
1		Para 1.1	some	same	
1		Para 1.2	<i>Sleep</i>	<i>sleep</i>	
1		Para 1.5	under utilised	under-utilised	
3		Para 4.1	Institute	Institutes	

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7	Para 6.1.10	2	unevenness 600	unevenness, 660
13	Table 8.4 against 66-67 under last but one col.		install 0 17	instal 0.17
14	Para 8.6.1.	12		
14	Table 8.5 against the year 1968 last col.	last	many fold 119 kg.	manifold 118 kgs.
17	Para 8.6.8	10	DFLS	DRLs
19	Para 8.6.11	11	prepares	Preparers
19	Para 8.7.1	3		
20	Para 8.7.1			
23	Table 8.13 below cocoons production circ. agains' 1966 under Jammu & Kashmir		11.0	11.01
27	8.10 Heading		Reeling of silk	Reeling of silk
28	Footnote below Table 8.17		utilisation percentages	utilisation percentage
29	Para 8.10.6	1	number	numbers
32	Para 8.10.15	15	bing	being
35	Para 8.10.20	12	continues	continue
38	Para 8.11.2	1	filature	filatures
45	Footnote below Table 9.2		that 304	that of 304
46	Para 9.6	1	Statistic about	Statistics about
48	10 Box Heading		Standards, quality	Standards, Quality
48	Para 10.2	4	in adequacy	inadequacy



53	Table 12.6 under Mulberry Yarn, Col. i	7s (Noil Yarn)
54	Para 13.2	worm seeds were showing country wise below table
58	Para 14.2.2	1.95
59	Table 14.3 Against Ready-made garments under Qty. 1968	..
62	Footnote against * 17 Box Heading	duty of raw silk—
63	item 6	Commission's Estimates o laying must
69	Sl. No. 4	Modern Mansion.
87	Sl. No. 1 under item V	Prof.
87	Sl. No. 4	Mumbakonam
88	Sl. No. 9	Iiker
99	Sl. No. 6	Government of Ke ala
102	Under 1966 of Col. ERI	80
110	Footnote	*Provisional
1110	Against item 11, last column	5.60
1117	Against Italy under 1966	6.1

PERSONNEL OF THE COMMISSION

Shri B. N. Banerji	.	.	.	.	.	.	.	.	.	.	.	Chairman
Shri M. Zaheer	.	.	.	.	.	.	.	.	.	.	.	Member
Shri S. Subramanian	.	.	.	.	.	.	.	.	.	.	.	Member.
Shri F. H. Vallibhoy	.	.	.	.	.	.	.	.	.	.	.	Member.

Secretary

Dr. P. V. Gunishastri



GOVERNMENT OF INDIA
MINISTRY FOR FOREIGN TRADE

New Delhi the 6th December 1969.

RESOLUTION

Tariffs:

No. 11(1)-Tar/69.—The Tariff Commission has submitted its Report on the continuance of protection to the Sericulture Industry on the basis of an inquiry undertaken by it under Sections 11(e) and 13 of the Tariff Commission Act, 1951 (50 of 1951). Its recommendations are as follows:—

- (1) The continuance of protection to the Sericulture Industry for a further period of five years at the existing rates is recommended. With a view to keeping a watch on the progress of the sericulture industry, a review may be held every alternative year.
- (2) If at any stage imported raw silk is needed to be used for re-export after fabrication, full drawback of duty may be allowed. Concessional rates of duty on the plea that such silk is needed for export or for substitution of exported textiles would, however, not be justified.
- (3) As spun silk yarn has substantial export potential, it is advantageous to convert internally all the available silk waste and then export it. The existing export policy may be reviewed and further augmentation of installed spinning capacity considered if this becomes necessary for the purpose.
- (4) With the increase in the production of synthetic fibres, it would be desirable to discourage internal consumption of silk and develop exports to the largest possible extent. Internal use of substitutes may be encouraged to the extent necessary.
- (5) Since prices of imported silk have a great impact on the domestic market, it is suggested that imports and distribution of imported raw silk should be canalised through the State Trading Corporation or the Central Silk Board, in order to avoid sudden fluctuations in the domestic prices.

- (6) Agreeing with the conclusions of the Filature Committee, it has been strongly recommended that the problem of improving the quality of reeling cocoons should be tackled at the basic level of production of mulberry leaves and cocoons.
- (7) The attention of the Central Silk Board as well as of the concerned State Governments is drawn to the alarming development in the increase in the cost of production of mulberry leaves and it is recommended that ways and means may be explored to bring down the cost of leaves.
- (8) Since the District of Dehra Dun in Uttar Pradesh is heavily forested, it would be desirable to undertake mulberry plantation in the forest areas where rearing operations can be conducted in order to provide plentiful supply of leaves to rearers. A planned silvicultural project for mulberry plantation is bound to yield good results and thereby increase the production of mulberry silk manifold.
- (9) The Indian sericulture industry has to improve its performance six-fold in order to reach Japanese standards. As a first step, irrigation facilities need to be introduced for all mulberry cultivations. Attention may also be given to the nutritive contents of mulberry leaves to ensure healthy growth of worms and reduction in wastage by mortality.
- (10) It is strongly recommended that the basic principle, that all layings must be tested, should be implemented and that the State Government of West Bengal may also enact suitable legislation to ensure that the seed producing grainages are licensed and adequately equipped for testing layings.
- (11) As the main reason for the reduction in the number of layings used in Jammu and Kashmir is said to be the general decline of sericulture in that State, urgent attention should be devoted to the solution of the problem of the sericulture industry in that State.
- (12) Reiterating the recommendations made in the 1966 report, a note of warning is sounded that unless effective steps are taken to rejuvenate the industry in Jammu & Kashmir the industry may disappear from this State in the next ten years.
- (13) The quality of raw silk, instead of improving, appears to have deteriorated since the 1966 inquiry. It is difficult to understand why steps were not taken to equip properly the testing houses, particularly when large sums are available for the purpose to research institutions and the Central Silk

Board. It is hoped that this serious shortcoming will be removed urgently so that testing may be rendered scientifically correct and acceptable.

(14) It has been recommended that the filatures may join the I.S.I. Certification Marking Scheme.

2. Government accept recommendation (1). Protection at the existing effective rates of protective duty to the products of the Sericulture Industry is proposed to be continued for a further period of five years ending on the 31st December, 1974. A slight rationalisation of the existing rates of protective duty on (i) silk yarn, including silk sewing thread, and silk waste [Items Nos. 46(1), 47 and 47(1) I.C.T.], and (ii) silk fabrics (Item No. 48 I.C.T.) is proposed to be effected by adopting a single rate of duty in each case instead of varying rates in force at present, as the differences have ceased to have any special significance. Necessary legislation for this purpose will be undertaken in due course.

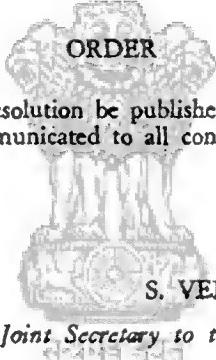
3. As regards recommendation (3), while agreeing that it is to the national advantage to export silk yarn rather than silk waste, Government would observe that the present spinning capacity, including the capacity licensed, appears to be adequate for this purpose.

4. With regard to recommendation (4), there is at present no indication that internal consumption is standing in the way of the export of silk fabrics. The question of taking steps to discourage the internal consumption of silk fabrics will be considered if and when a situation arises where internal consumption is found to be hampering exports.

5. As regards recommendation (5), Government accepts the need to minimise fluctuations in the domestic prices of raw silk, in the interests of export promotion, besides the need for consolidating the internal demand. They have accordingly accepted the recommendation of the Tariff Commission for canalising the import of raw silk through the State Trading Corporation or the Central Silk Board.

6. With reference to recommendation (14), owing to the lack of adequate arrangements for grading and testing of silk, it is considered premature for filatures to join the I.S.I. Certification Marking Scheme. This may be feasible later when adequate arrangements for testing and grading are made.

7. Government have taken note of recommendations (2) and (6) to (12), and suitable steps will be taken to implement them to the extent possible. Recommendation (13) has also been noted and the Central Silk Board will look into the question further with a view to taking appropriate action. The attention of the concerned State Governments is invited to recommendations (6) to (12). The attention of the industry is particularly drawn to recommendation (9).



ORDER

ORDERED that the Resolution be published in the Gazette of India and a copy thereof communicated to all concerned.

S. VENKATESAN,

Joint Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE SERICULTURE INDUSTRY

1.1. In its heyday silk constituted about one per cent of the total textile fibre production of the world and in 1929 silk production stood at the figure of 61 million kgs. Since then 1. ~~Main finding~~ textile fibre production has gone up two and a half times but that of raw silk has come down to about half at about 34 million kgs. In India too the increase in the production of textile fibres was of the same order but raw silk production during the last forty years has more than doubled. Even then it constitutes one-fifth of one percent of the total textile fibre production of our production.

1.2. Mysore produces 80% of the mulberry raw silk, W. Bengal 15% and Jammu and Kashmir only 3%. In 1968 the production of W. Bengal was 80% of that of 1965 and that of Jammu and Kashmir 48% of 1962. Mysore made up for the deficiency with the result that production in 1968 was 11% above the level of 1965. The total production of raw silk was 2.3 million kgs. in 1968. *Special measures have to be taken in W. Bengal to make the industry stable and to revise it in Jammu and Kashmir where it shows a Steep decline.*

1.3. Per hectare, Japan which supplies 56% of the world's raw silk as against India's share of 5%—produces 720 kgs. of cocoons while the Indian average is only 280 kgs. The silk content in the Japanese cocoons is one-sixth while it is only one-fifteenth in India. The Industry in India has yet to go a long way before coming anywhere near world standards. Irrigation facilities for mulberry cultivation and improvement of strains of silk worm are a crying need. The cost of production in India is fortunately not proportionate to the disadvantage in productivity.

1.4 Uttar Pradesh is an area of promise and can produce high quality univoltine raw silk for which special encouragement needs to be provided.

1.5. The realisation from spun silk yarn is about Rs. 29.00 per kg. while the raw material (silk waste) sells for Rs. 12.50 per kg. More than half of the silk waste is exported which is detrimental to the Indian economy particularly when the capacity of the Indian spun silk mills continues to remain under utilised. *Exports of waste*

silk needs to be banned so that the entire available waste could be converted into yarn which may then be exported.

1.6. The quality of Indian silk is poor and it does not qualify even for the minimum grade of International standards. There is a general dissatisfaction with the product of filatures and also with their quality control arrangements. These need to be greatly improved.

1.7. Export of silk fabrics has greatly increased during the last two years and may touch Rs. 9 crores this year. Export entitlements permit exporters to import 40 per cent of the value as raw silk. International prices being lower and quality being much superior to Indian silk, such imports are likely to hamper not only the growth but even the existence of the Indian industry. Being a luxury item the market of raw silk is very sensitive and any prospect of import at favourable rates causes a slump. Care needs to be taken to ensure that the import policy is so regulated that it does not have any adverse effect on the Indian industry, until such time as productivity and quality improve.

1.8. The disadvantage to the indigenous industry works out to 32%. Further protection of the industry has been recommended for a period of five years at the existing rates on the items mentioned in paragraph 15 of the Report and to be reviewed every alternate year.

2. The last inquiry into the sericulture industry, the eighth in the series, was conducted in 1966 by the Commission which recommended that protection should be continued for a further **Previous tariff inquiries** period of three years, i.e., till 31st December, 1969 and that the existing rates of duty on tariff item Nos. 46, 46(1), 47(a), 47(b), 47(c), 47(1), 48(a), 48(b) and 48(c) covering raw silk and cocoons, silk yarns and silk fabrics should be maintained. Government of India accepted the recommendations of the Commission in the Ministry of Commerce Resolution No. 11(1)-Tar/66, dated 19th November 1966 and protection was extended upto 31st December 1969 by the Indian Tariff (Amendment) Act, 1966.

3. The period of protection granted to the sericulture industry is due to expire on 31st December 1969. The present inquiry has therefore been undertaken by us under Section 11(e) **Present inquiry** read with Section 13 of the Tariff Commission Act, 1951 under which we are authorised to inquire into and report on any further action required in relation to the protection granted to an industry, with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

4.1. Questionnaires were issued to mulberry cultivators, graineurs, rearers of silk worms, producers of raw silk, silk throwing and twisting factories, spun silk mills, manufacturers of silk

4. Method of inquiry fabrics, the Central Silk Board, and the State Governments concerned. Central and Regional Sericulture Institute, the Indian Standards Institution, the All India Handloom Board, Textile Commissioner, the Khadi and Village Industries Commission were also addressed. A Press Note was issued on 15th April 1969 inviting interested parties to send their views to the Commission. A list of associations, firms and other bodies to whom questionnaires or letters were issued and those who replied is given in Appendix 1.

4.2. Data with regard to the cost of production of filature silk were collected from three filature units in Mysore which are run by the State Government and estimates of fair price for the future were worked out by us on the basis of the information so collected.

4.3. A public inquiry into the industry was held at the Commission's office on 22nd August 1969. A list of those who were present at the inquiry is given in Appendix 2.

5. For the purpose of protective tariffs the term 'silk' includes both mulberry and non-mulberry silk. The last inquiry included raw silk and silk cocoons, silk waste and noils, silk yarn including thrown silk warps and yarn spun from silk waste as also from noils, silk sewing thread and silk fabrics. No request for the extension or reduction of the scope of inquiry was received from any source and therefore the scope of the inquiry was limited to the following :

Silk, raw (excluding silk waste and noils) and silk cocoons (ICT item No. 46).

Silk, waste and noils [Item No. 46(1)].

Silk yarn including thrown silk warps [Item No. 47(a)].

Yarn spun from silk waste [Item No. 47(b)].

Yarn spun from noils [Item No. 47(c)].

Silk sewing thread [Item No. 47(1)].

Silk fabrics [Item No. 48(a), (b) and (c)].

6.1. The extent to which the ancillary recommendations made by the Commission in its report of 1966 have been implemented is indicated in the following paragraphs :

6. Implementation of the Commission's ancillary recommendations

6.1.1. Recommendation No. 1

"The State of Mysore should develop mulberry nursery plantations to an extent which may be able to provide new high yielding and low cost varieties to the entire State within a reasonably foreseeable period."

(Recommendation No. 10 of Government Resolution of 1966)

The Government of Mysore has reported that the seed material from all nurseries and also that available from seed farms are distributed to the sericulturists desiring to develop new plantations. The Central Silk Board has informed us that suitable grafts have been evolved and are being supplied to sericulturists. The pace of replacement with high yielding varieties was, however, expected to be quickened with the provision of irrigation facilities without which any substantial improvement is unlikely.

6.1.2. Recommendation No. 2.

"If the advantage of low cost of leaves in West Bengal is lost because of their poor quality, the removal of this handicap may enable this State to produce at less cost and with equivalent area more than four times the raw silk produced in Mysore. This matter needs the attention of the Central Silk Board as well as the Government of West Bengal."

(Not included in Government Resolution)

Owing to low content of protein in the leaf during the period from June to October when the leaf yield is high, superior breed of silk worms cannot be reared. During winter months when conditions are favourable for silk worm rearing leaf yield is low for undertaking large scale rearing. The Central Sericultural Research Station, Berhampore, is trying to evolve a race superior to the present Nistari which can withstand the rigours of the weather and utilise the plentiful availability of leaf during the monsoon months.

6.1.3. Recommendation No. 3.

"While the Mysore State has enacted legislation prohibiting breeding from any but tested seed, other States have not so far taken this step. We consider that other States also need to enact such legislation in order to improve yield and also to protect the industry from effects of epidemics affecting silk worms."

(Recommendation No. 6 of Government Resolution of 1966)

Legislation exists in Mysore, Tamil Nadu and the Punjab. The Government of Himachal Pradesh has introduced in the legislature a bill known as "The Himachal Pradesh Silkworm Control Bill" and the State of Andhra Pradesh proposes to enact a statute for this purpose. The proposal for legislation in West Bengal is under consideration of Government. The Governments of Uttar Pradesh and Jammu and Kashmir do not consider such an enactment necessary since all seed is already produced under Governmental supervision.

6.1.4. Recommendation No. 4

"In order that yield may improve in West Bengal attention needs to be paid to the testing of seed and also to the improvement of rearing conditions by setting up common rearing centres as well as by training and educating private rearers in more advanced methods of sericulture."

(Recommendation No. 7 of Government Resolution of 1966)

The Government of West Bengal has reported that it is proposed to set up 65 rearing centres during the Fourth Plan period provided funds are available and that there is another scheme for extension service to educate private rearers in advanced methods of sericulture.

6.1.5. Recommendation No. 5

"Perhaps there would be greater incentive to improved production in Jammu and Kashmir if the sericulturist has a personal interest in the business by way of purchase of seed on payment growing his own mulberry or purchasing rights to harvest leaf on payment. It is worthwhile making an experiment in a small area in order to ascertain if with the creation of such vested economic interests, the yield or performance improves or deteriorates."

(Recommendation No. 11 of Government Resolution of 1966)

As far as the Commission is aware, no action has yet been taken by the Government of Jammu & Kashmir on this recommendation. The Commission did not even have the benefit of a reply from the State Government nor did any representative from that State attend the public inquiry.

6.1.6. Recommendation No. 6

"Attention needs to be paid to the improvement of the charkha in such a way that it may become more efficient and the defects from which its product now suffers may be minimised; and also so as to incorporate labour saving devices.

(Recommendation No. 2 of Government Resolution of 1966).

The main defects of reeling on charkhas are common cooking and reeling basin, variation in the speed of reeling and passage of slugs in the yarn. Once cooking operations are separated from reeling the charkha acquires the features of cottage basin and it is heartening to note that the number of cottage basins has since the last inquiry considerably increased.

6.1.7. Recommendation No. 7

"The object of setting up the spun silk mill in Assam where non-mulberry silk waste is available in substantial quantities would be not only defeated if this mill were to avoid processing non-mulberry silk waste and concentrate only on mulberry waste but also result in unhealthy competition with Channapatna."

(Recommendation No. 9 of Government Resolution of 1966)

There has been a progressive increase in the proportion of non-mulberry silk waste used by the Assam Spun Silk Mills as the following figures would show :—

Table No. 6. 1

Consumption of silk waste by Assam Spun Silk Mills

(In kgs.)

Year	सालाना खपत			Total	Percentages	
	Mulberry	Non-mulberry			Mulberry	Non-mulberry
1	2	3	4	5	6	
1965	.	1,13,861	25,027	1,38,888	82.0	18.0
1966	.	74,956	47,489	1,22,445	61.2	38.8
1967	.	44,031	67,785	1,11,816	39.4	60.6
1968	.	34,577	64,269	98,946	35.1	64.9

6.1.8. Recommendation No. 8

"It would be desirable to exercise caution to ensure that no duplicate or excess capacity is created for throwing and twisting. It would also be advisable to estimate the present shortage in production capacity and then to plan the installation of throwing and twisting equipment as part of filatures to meet the shortage."

(Recommendation No. 3 of Government Resolution of 1966)

The Central Silk Board has reported that no requests for new installations have so far been considered and that the need for any additional installation for the filature units has so far not arisen.

6.1.9. Recommendation No. 9

"While it is desirable to explore the possibility of developing the sericulture industry in other States too, it would perhaps be more desirable to ensure that States where rapid progress in production and quality can be made should receive prior Government assistance."

(Recommendation No. 5 of Government Resolution of 1966)

The allocations of the funds during the last and the current financial years are more or less in proportion to the share of the State in the total production of raw silk except in the case of the States of Mysore and Jammu & Kashmir. However, since the utilisation of the allocation is subject to an equal contribution by the State Government, and the Central Government's contribution is in the form of 50% grant and 25% loan the proportionately lower allocation for Mysore is not likely to affect the developmental activities of the State. The main difficulty is that the State Government has not been able so far to raise its contribution to a level proportionate to its share in the total production. An assurance was however given by the Central Silk Board that should the Government of Mysore be in a position to use more funds there would be no difficulty in arranging the same, subject of course to the presumption that suitable matching grant would be automatically available.

6.1.10. Recommendation No. 10

"There is much scope for improvement in the quality of raw silk, as there are complaints of unevenness sub-standard quality, greater degumming loss and lack of lustre."

(Recommendation No. 12 of Government Resolution of 1966)

There does not appear to have been any perceptible improvement in the quality. This matter has been dealt with further in paragraph 10.

6.1.11. *Recommendation No. 11*

"It is desirable that certain units or areas of production should be entrusted to the testing houses and that they should test according to Indian Standards the entire production in these areas."

(Recommendation No. 4 of Government Resolution of 1966)

The same procedure for testing continues as in the past. This matter has been discussed in paragraph 10.

6.1.12. *Recommendation No. 12*

"The Central Silk Board may give attention particularly in States like Jammu & Kashmir and West Bengal to train sericulturists even on a small scale to start with, in order to secure a higher yield at a lower cost."

(Recommendation No. 8 of Government Resolution of 1966)

We regret to note that no action appears to have been taken on this recommendation.

6.1.13. *Recommendation No. 13*

"Of late a certain amount of slackening of interest in tasar silk goods has been noticed as a result of which there is alarm in the circles concerned with the production of tasar silk. This demonstrates that caution should be exercised in developing an industry solely depending upon changing fashions in foreign market which may prove to be temporary."

(Not included in Govt. Resolution)

Tasar exports have since picked up considerably and there is no occasion now to entertain any doubt with regard to the desirability of continued development of the industry.

7.1. At its meeting held on 15th and 16th July 1967 the Central Silk Board adopted a resolution for the appointment of a Committee **7. Other investigations after 1966 affecting the industry** to go into the question of raw silk filatures and on the 26th of July 1967, a Committee was constituted with the Vice-Chairman of the Board as Chairman and five other members with the following terms of reference :

- (1) To examine the working of the Government Silk Filature establishments in Mysore and Jammu & Kashmir States with particular reference to the modernisation of the filatures in Jammu & Kashmir and the continued heavy losses suffered by the Government filatures in Mysore State year after year.
- (2) To suggest measures for ensuring economic working of the filatures on a stable basis.
- (3) To examine the marketing organisation for cocoons and raw silk in Mysore and Jammu & Kashmir States and suggest measures that would ensure a fair price to the primary producers.

These terms were subsequently enlarged to include the following :

- (4) To examine the methods followed at present for estimating the production of cocoons and raw silk in various States.
- (5) To consider ways and means to improve the quality of indigenous filature raw silk within the available means.
- (6) To examine the specific request of the Government of Mysore regarding grant of subsidy to the filatures for compensating the losses suffered by them.

The Committee formulated its report in two parts, Part I, which was submitted on 16-5-1968 dealt with the working of the Government Silk Filatures in Mysore State and other matters directly connected with it; Part II which was submitted on 31-3-1969 deals with the remaining matters. Both are comprehensive studies and we have referred in the course of this report to the main recommendations made by the Committee.

7.2. The Central Silk Board had also resolved to revive the Silk-Waste Committee so that it could go into the entire question of export of silkwaste and the working of the two spun silk mills in the country. Consequently on July 20th 1967 a Committee consisting of the Vice-Chairman, Central Silk Board as Chairman and three other Members was constituted with the following terms of reference :

- (1) To review the operation of the export policy for silkwaste since 1963 and the working of the Government Spun Silk Mills, Channapatna (Mysore) and Assam Spun Silk Mills, Jagi Road (Assam).

- (2) To suggest measures for the revision of export policy in the light of the reported increase in demand for spun silk yarn and hand spun mulberry silk waste yarn for production of fabrics for export and the rise in export prices for silk-waste during the post-devaluation period.
- (3) To consider the questions relating to the banning of exports of throwsters waste and pierced cocoons as also import of spun silk yarn.
- (4) To consider the proposal of Shri M. C. Basappa made at the 33rd General Body meeting of the Board held at Bombay on 14th September, 1967 that the Board should take up the marketing of silkwaste in the country.

The Committee made an interim report on 12-10-1967 and its final report was submitted on 12-8-1968.

8.1. India continues to occupy the fourth place in the production of silk amongst sericultural countries. The following figures extracted from the Bulletin of the International Silk Association, First Quarter, 1969 show the estimated production of mulberry raw silk producing countries in the world in 1967. For the purpose of comparison figures and percentages for 1964 have also been given.

Table No. 8.1
World Production of Mulberry Raw Silk

(In tonnes)

Country	Production in 1964	Percentage in 1964	Production in 1967	Percentage in 1967
1. Japan	19,458	60	18,926	56
2. China	7,000	22	7,500	22
3. U. S. S. R.	2,618	8	2,833	8
4. India	1,466	4	1,668	5
5. Korea	787	2	1,550	4
6. Italy	561	2	561	2
7. Iran	145	1	145	1
8. Brazil	89	Nil	146	1
9. Turkey	72	Nil	72	Nil
10. Yugoslavia	60	Nil	50	Nil
11. Rest of World	206	1	422	1
TOTAL	32,462	100	33,873	100

8.2. Comparable figures in other countries for non-mulberry silk are not available. As far as we could ascertain China is the only country where Tasar silk is produced. No figures for Eri and Muga silk are available. Based on the figures of 1968 percentages of production of mulberry and non-mulberry silk in India in the different States were as follows :

Table No. 8.2
Share of States in indigenous production of raw silk

State	% of mulberry silk pro- duction to total production of all States	% of non- mulberry silk pro- duction to total production of all States	% of mulberry and non- mulberry silk pro- duction of all States
Mysore	80·58	..	60·70
Assam	0·92	47·69	12·47
West Bengal	15·34	2·51	12·17
Madhya Pradesh	0·08	23·61	5·86
Bihar . . . . .	..	22·34	5·51
Jammu & Kashmir	2·73	..	2·06
Orissa . . . . .	..	3·68	0·90
Others	0·40	0·17	0·39
	100·00	100.00	100·00

8.3. More than 98% of the total mulberry silk comes from the States of Mysore, West Bengal and Jammu & Kashmir. More than 93% of the non-mulberry silk comes from Assam, Madhya Pradesh and Bihar. The approximate total value of raw silk produced in 1968 was about Rs. 26 crores of which about Rs. 21 crores was accounted for by mulberry and about Rs. 5 crores by non-mulberry silk.

8.4. Both mulberry and non-mulberry silk production has increased considerably since the last inquiry. Over the last three decades the output has increased by about 72 per cent as the following figures would show :

Table No. 8.3

Production of raw silk—Progressive increase

(In tonnes)

Year	Mulberry	Non-mulberry	Total
1931-32	938	249	1,187
1949	971	377	1,348
1954	1,088	232	1,320
1962	1,401	380	1,781
1965	1,634	518	2,152
1968	1,745	572	2,317

8.5. The first stage in sericultural operations is the production of mulberry leaves. Second comes grainage activity; third, rearing of silk worms upto the stage of cocoons; and fourth, reeling or spinning of cocoons into raw silk. Conversion of cocoons into raw silk includes reeling, twisting, throwing, carding and spinning of silk waste. It is necessary therefore to examine the position of the industry in respect of each one of these separate operations.

Moriculture

8.6. The area under mulberry cultivation which was 86,191 hectares in 1965 went up to 87,989 hectares in 1966, and to 88,050 hectares in 1967 and stood at 93,283 hectares in 1968 showing an increase of only 8 per cent in the course of three years. The total area in 1951 was 58,788 hectares and the cumulative annual rate of increase since the first year of the first plan works out to about 3%.

The total number of trees increased from 3.29 million to 4.08 million in 1966, fell to 3.94 million in 1967 and further went down to 3.67 million in 1968. Jammu & Kashmir alone had 2.00 million trees in 1968. Particulars of area under mulberry and the number

of trees in each State are given in Appendix 3. The progress in the production of Mulberry leaves by different States is shown below :

8.6.1. *Mysore*.—Mulberry cultivation in the State of Mysore was as follows :-.

Table No. 8.4
Mulberry Cultivation in Mysore

Year	Area under mulberry cultivation			Yield of leaves in kg. per hectare per annum		Average cost of production			
	Irrigated	Rain fed	Total	Irrigated	Rain fed	Irrigated		Rainfed	
						Per hect.	Per kg.	Per hect.	Per kg.
						Rs.	Rs.	Rs.	Rs.
1965-66	15,000	63,000	78,000	8,000 to 12,000	3,000	2,500	0.25	580	0.20
1966-67	15,250	63,250	78,500	8,000 to 12,000	3,000	3,000	0.30	600	0.22
1967-68	16,300	67,500	83,800	8,000 to 12,000	3,000	3,300	0.33	750	0.25

The total irrigated area which was 9600 hectares in 1965 went upto 15,000 hectares in the first quarter of the next year. There has been an unexpectedly high increase in the irrigated area. The yield from irrigated areas continues to be three to four times that of rain-fed areas. The cost of production per hectare has however gone up from Rs. 2,500 in 1965 to Rs. 3,300 in 1968 in irrigated and from Rs. 580 in 1965 to Rs. 750 per hectare in 1968 in unirrigated areas. For rainfed areas per kg. cost of leaves was 9.2 paise in 1952; 10.3 paise in 1957 and 11.5 paise in 1963. It went upto 17 paise in 1965 and is now reported to be 25 paise. Between 1952 and 1963 a period of 11 years the total increase was that of 25 per cent but in the course of the last five years it has gone up by more than 117 per cent. This increase in the cost of production of mulberry leaves has a very significant effect on the price of cocoons. We

could not ascertain the reasons for such a high rise in the price of mulberry leaves. We would nevertheless draw the attention of the Central Silk Board as well as the State Governments to this alarming development and recommend that ways and means may be explored to bring down the cost of leaves. Without substantial increase in yield of mulberry leaves from the limited area available for sericulture accompanied by a corresponding reduction in the cost of these leaves, progress is likely to be slowed. It is therefore suggested that irrigation facilities may be made available to the fullest possible extent in the mulberry growing areas and such high yielding varieties may be introduced as will reduce the cost of cultivation. We were informed at the public inquiry that it is proposed to install 20,000 tube wells during the Fourth Plan period for irrigation of lands under mulberry. This is no doubt laudable but it has also to be borne in mind that mere irrigation facilities and high yielding varieties are not likely to yield satisfactory results unless the cost of leaves is also at the same time appreciately brought down.

8.6.2. West Bengal.—The area under mulberry cultivation which was 6494 hectares in 1965 had come down to 5566 hectares in 1968. In addition to bush cultivation there are said to be about 4.14 lakh of trees also. The number of trees at the time of last inquiry was reported to be 4.52 lakhs. Thus, in the case of trees also there has been substantial reduction. Drought and inadequate return on cocoons are said to be responsible for the reduction in area and number of trees. Redoubled efforts are therefore required for a rapid recovery of the industry in West Bengal. Yield of leaves and their cost for West Bengal are given below :—

Table No. 8.5

Mulberry cultivation in W. Bengal

Year	Yield of leaves in kg. per hectare per annum		Cost of production					
			Irrigated			Rainfed		
	Irriga-ted	Rain-fed	Per hectare Rs.	Per kg. Rs.	Per hectare Rs.	Per kg. Rs.		
1966 . . .	16,380	15,884	2,357	0.15	2,401	0.15		
1967 . . .	16,500	15,000	2,475	0.15	2,433	0.15		
1968 . . .	17,000	15,500	3,230	0.19	2,560	0.17		

The production and cost of leaves in the two major mulberry silk producing States, and of the final cost of leaves as related to cocoons or/and silk produced are compared below :—

Table No. 8.6

Estimated area, yield and cost in Mysore & West Bengal for 1968

Particulars	Mysore	West Bengal
1. Area under mulberry in hectares		
(a) Rainfed	67,500	5,482
(b) Irrigated	16,300	85
TOTAL	83,800	5,567
2. No. of trees bearing leaves	10,000	4,14,000
3. Average yield in kg. per hectare		
Bush		
(a) Rainfed	9,000	15,500
(b) Irrigated	10,000	17,000
(c) Per tree	10 to 40	19
4. Total yield (in '000 kg.)		
Bush		
(a) Rainfed	202,500	84,971
(b) Irrigated	163,000	1,445
(c) Per tree	250	7,866
TOTAL (a+b+c)	365,750	94,282
5. Cost per kg. in paise		
Bush		
(a) Rainfed	25	16.5
(b) Irrigated	33	19.0
(c) Per tree	25 to 30	10.5

Table No. 8.6—*contd.*

Particulars	Mysore	West Bengal
6. Cost of Mulberry leaves (in '000 kg.)		
Bush		
(a) Rainfed	50,625	14,020
(b) Irrigated	53,790	274
(c) Per tree	70	836
7. Total cost of Mulberry leaves (in '000 Rs.)	1,04,485	15,130
8. Cocoons produced (in '000 kg.)	20,365	4,382
9. Raw silk Produced (in '000 kg.)	1,406	268
10. Leaves consumed per kg. of cocoons (in kg.)	18	21
11. Average cost of leaves per kg. of cocoons (in Rs.)	5.13	3.45
12. Average cost of leaves per kg. of raw silk (in Rs.)	74.31	56.45

8.6.3. Certain significant conclusions can be drawn from these figures. In terms of rain-fed area the total hectarage in Mysore is almost 15 times of that of West Bengal but Mysore produces only about five times the quantity of cocoons produced in West Bengal. This is no doubt due to the high yield of mulberry leaves in West Bengal. The total quantity of raw silk produced in West Bengal is however lower in proportion to cocoons used owing to the high renditta in West Bengal as compared to that of Mysore.

8.6.4. *Jammu & Kashmir*.—The number of trees in 1965 was reported to be about 18 lakhs which has gone up to 20 lakhs now. The State Government has not reported the cost of mulberry leaves or the expenditure incurred by it on maintenance of the trees. However, the cost of mulberry leaves per kg. according to the estimates framed by the Filature Committee (1969) works out to from 6. to 10 paise.

8.6.5. *Assam*.—There has been marginal increase in the area as well as in the number of trees. The area in 1968 under mulberry cultivation, all of which is rainfed, was 970 hectares. The yield of leaves is estimated at 10,000 kg. per hectare and the cost of production has now gone up to 14 paise as against 9 paise in 1965. The

State Government has reported that improved varieties of mulberry samples and cuttings are prepared for grafts and low yielding varieties of mulberry are gradually being replaced by the superior high yielding varieties, though the indigenous varieties of mulberry have proved to be more disease resistant.

8.6.6. Tamil Nadu.—The area under mulberry cultivation has gone up from 1454 hectares in 1965 to 1772 in 1968 with a progressive increase in each of the three years. There is no regular tree plantation in this State. The yield of leaves in rainfed area is 3250 kg. and in irrigated 5248 kg. per hectare. The cost of production at the time of the last inquiry was 21 paise per kg. in rainfed area and 15 paise in irrigated area. In 1968 the cost of production was reported to be 17 paise per kg. in rainfed and 20 paise per kg. in irrigated area. The State Government has reported that experiments have been started in Hosur to assess the effect of combination of manure and irrigation.

8.6.7. Other States.—In Madhya Pradesh the area remained the same in 1968 as in 1965 though it had fallen in the intervening period. The yield per hectare is reported to be 3700 kg. and the cost of production is 15 paise per kg. In Punjab, there are mostly trees. The average yield of mulberry leaves per tree is 36 kg. and the cost of production works out to 7 paise per kg. only.

8.6.8. In Uttar Pradesh the total area went down from 219 hectares in 1965 to 109 hectares in 1968 but the number of trees registered a small increase from 60,000 to 67,000. It was stated by the representative from the State Government at the public enquiry that owing to pressure on land for food crops it is difficult to obtain land for mulberry bush cultivation. Most of the mulberry silk is produced in the District of *Dehra Dun in U.P.* which is situated in the sub-mountain region having a moderate climate found to be most suitable for the rearing of good univoltine strains. As in other univoltine areas, here also sericulture can at best be considered a subsidiary occupation and it cannot therefore be expected, that land which is needed primarily for food crops can be made available for mulberry trees. The area is nevertheless heavily forested and it would be desirable to undertake mulberry plantation in forest areas bordering on villages where rearing operations can be conducted in order to provide a plentiful supply of leaves to rearers. A planned silvicultural project for mulberry plantation is bound to yield good results and it should not be difficult to increase the present production of mulberry silk many fold if this is done.

8.6.9. Particulars of yield per hectare and the cost of production per kg. of mulberry leaves in each of the States are compared below :—

Table No. 8.7

Mulberry yield and cost

Name of the State	Av. annual yield in kg. of mul- berry leaves per hectare		Cost of produc- tion of leaves per kg. in paise		Av. an- nual yield of mul- berry leaves per tree	Cost of produc- tion from trees per kg. in paise
	Rain- fed	Irriga- ted	Rain- fed	Irriga- ted		
1	2	3	4	5	6	7
1. Mysore . . .	9,000	10,000	25	33	10 to 40	25 to 30
2. W. Bengal . . .	15,500	17,000	17	19	19	10
3. Bihar . . .	12,000	..	18	N.A.	15	..
4. Jammu & Kashmir . . .	—	—	—	—	17	6 to 10
5. Uttar Pradesh . . .	5,000	7,000	—	—	25	31
6. Tamil Nadu . . .	9,250	5,248	17	20	..	..
7. Assam . . .	10,000	..	14	..	N.A.	N.A.
8. Manipur . . .	2,700	..	12	..	30	5
9. Punjab . . .	..	..	..	..	36	7
10. Madhya Pradesh . . .	3,700	..	15	..	..	..

The cost of mulberry leaves from irrigated land is higher than from land in rainfed areas notwithstanding high productivity and yield per unit of land in the former. We understand that this is more than compensated by the better nutritional properties of the leaves reflected in the quality of cocoons which give a rendita of 10 as against that of 15 to 17 for cocoons fed on leaves from rainfed areas.

8.6.10. It is a matter of not only surprise but considerable dismay that Mysore which is the major silk producing State in the country continues to register a very low average yield in the rainfed area but at the highest cost for the cost range in the case of rainfed area is from 12 paise in Manipur to 25 paise in Mysore. For irrigated areas figures have been furnished by only four States and these range from 19 paise in West Bengal to 33 paise in Mysore.

8.6.11. Proficiency in the production of raw silk depends first on the cost of production of mulberry leaves and next on the breed and strain of cocoons, for the latter determines the renditta. Allowing for the same consumption of mulberry leaves per unit of cocoons in Japan as in India, Japan's average production of cocoons per hectare is 255% of the average for India. For as against 720 kg. of cocoons per hectare produced in Japan, India produces only 280 kg. per hectare. The renditta further magnifies this disparity since the Japanese renditta is six as against the Indian average of 15. Consequently as against the yield of 119 kg. of raw silk per hectare in Japan the average yield for India works out to 18.12 kg. only which is less than one-sixth of the Japanese figure. It is therefore clear that in terms of cost of leaves and rearing efficiency, the Indian industry has to improve its performance six-fold in order to reach Japanese standards. The cost of production of mulberry leaves needs to be reduced to less than half the current prices of Mysore. The renditta has also to be improved by two and a half times. As a first step, irrigation facilities need to be introduced for all mulberry cultivation. Almost equal if not more attention needs to be given to the nutritive content of mulberry leaves, to ensure healthy growth of worms and reduction in wastage by mortality.

Seed Production and Imports :

8.7.1. It has been observed that the silk yielding characteristics of a particular strain are not stable and the parent stock tends to deteriorate in quality as a result of inbreeding and multiplication. Rejuvenation of races and evolution of new breeds in order to maintain a pre-determined standard of production is therefore a constant need. Another basic requirement is that all eggs must be disease free. For this purpose each female moth is squashed immediately after ovulation and samples of the centrifuged remains are examined under the microscope for detection of disease. Layings of females which are found diseased are then destroyed and the rest known as disease free layings or DFLS. are allowed to be propagated. In Mysore about 30 per cent of the seed used for cocoons is produced in Government grainages and the remaining 70 per cent by licensed seedmen. The terms of the licence require the latter to maintain equipment for the

purposes of undertaking the required test of layings. The position of the production of seed in Government grainages as well as by licensed seed prepares during the last three years was as follows :—

Table No. 8.8

Production of layings in Mysore

Year	No. of Govt. grainages	DFLs produced in thousands	% of Total	No. of licensed grainages	DFLs produced in thousands	% of Total	Total DFLs in thousands
1966 . .	52	2,35,50	33	473	4,86,18	67	7,21,68
1967 . .	54	2,76,00	32	489	6,00,25	68	8,76,25
1968 . .	55	2,89,94	33	450	6,93,31	67	9,83,25

8.7.2. We have been assured that the Department of Sericulture of the Government of Mysore undertakes frequent inspections of the licensed grainages to ensure that these are adequately equipped and that the necessary tests are actually carried out.

8.7.3. *West Bengal* : The position with regard to the production of layings in West Bengal is as follows :—

Table No. 8.9

Production of Layings in West Bengal

Year	No. of Govt. grainages	Layings produced in thousands	% of total	Layings produced in thousands by private rearers	% of total	Total layings produced in thousands
1966 . .	7	6806	22	23 802	78	30608
1967 . .	7	3633	11	29385	89	33018
1968 . .	7	4839	17	24112	83	28951

8.7.4. The State Government has informed us that sample testing of layings of private grainages are undertaken by sericultural demonstrators, but the major portion of the seed remains unexamined. The number of private grainages could not be ascertained. According to the information furnished to us the total number of layings used in 1965 were 33.5 millions. This figure fell down to 30.6 million in 1966, went up to 33.0 million in 1967 and again fell to 29.0 million in 1968. The reasons for the sharp fall in the availability and use of layings is said to be the excessive drought in 1967 and heavy rain in 1968 which resulted in inadequate availability of mulberry leaves.

8.7.5. It would be observed that of the total laying used more than 80 per cent are not tested in accordance with the approved method of testing. Sporadic and occasional testing by demonstrators cannot eliminate disease though it may help in determining its incidence. The number of layings and the total quantity of silk produced from them in Mysore and West Bengal are as follows :—

Table No. 8.10
Comparison of layings used

Year	Layings used (in thousand)		Raw silk produced in kg.		Layings used per kg. of raw silk	
	Mysore Nos.	West Bengal Nos.	Mysore	West Bengal	Mysore	West Bengal
1966 . .	7,21,68	3,06,08	10,93,537	3,09,023	66	99
1967 . .	8,76,25	3,30,18	12,83,943	2,90,892	68	113
1968 . .	9,83,25	2,89,51	14,06,101	2,67,656	63	108

8.7.6. West Bengal has used 50 to 60 per cent more layings for the production of the same quantity of raw silk. Low renditta would account for only a small fraction of this wastage; the rest is undoubtedly due to the use of untested and diseased layings which are not only unproductive but also liable to infect other healthy layings. This is in our view an unsatisfactory state of affairs and we strongly recommend that the basic principle that all layings must be tested should be implemented. We suggest that the State Government may soon enact suitable legislation to ensure that seed producing grainages are licensed and adequately equipped for testing layings.

8.7.7. Jammu & Kashmir: The figures of the production and imports of seed in Jammu & Kashmir during the last three years are as follows:—

Table No. 8.11
Layings in Jammu & Kashmir

(Figures in '000)

Year	Production	Imports	Total
1966	1,456	2,520	3,976
1967	2,656	1,344	4,000
1968	2,353	1,344	3,697.

There has been no appreciable improvement in the number of layings used during the last three years. The total number of layings used in 1965 was about 3.8 million and this figure increased to 4 million in each of the two years 1966 and 1967 but fell to 3.7 million in 1968. The reason for this reduction in the number of layings used is said to be the general decline of sericulture in Jammu & Kashmir. We understand that the number of rearers has come down from 80,000 to 28,000 in the course of years as sericulturists are losing interest in the industry. The number of indigenous laying has no doubt increased appreciably and the imports have correspondingly gone down to about 53 per cent of the level of 1966 but the total number of layings used in 1968 are 8 per cent lower than those of 1965. Urgent attention to the solution of the problems of the sericulture industry in this State is needed. Particulars of layings used and raw silk produced are as follows:—

Table No. 8.12
Raw silk produced in Jammu & Kashmir

Year	Layings used (in '000)	Raw silk produced kg.	Layings used of silk per kg.
1966	3,976	75,520	53
1967	4,000	67,832	59
1968	3,697	47,697	77

The ratio of layings used per kg. of raw silk was somewhat better than that of Mysore in 1966 and 1967 but went up in 1968 by about 20 per cent of that of Mysore. This is another alarming development.

8.7.8. The performance of the layings in the production of cocoons during each of the three years under review was as follows :—

Table No. 8.13

Layings used for production compared

	Mysore	West Bengal	Jammu & Kashmir
Layings used in Nos.			
1966	7,21,68,000	3,06,08,000	39,76,000
1967	8,76,25,000	3,30,18,000	39,99,720
1968	8,83,25,000	2,89,51,000	36,96,640
Layings used in kg.			
1966	15,532.6	61,216.0	994.00
1967	17,540.0	6,603.7	999.93
1968	17,665.0	5,790.4	924.16
Cocoons produced in Lakh kgs.			
1966	163.45	43.89	11.0
1967	190.50	46.04	7.35
1968	203.65	43.82	N.A.
Cocoons produced per kg. of seed used			
1966	1,052.00	700.61	1,107.00
1967	1,086.00	697.00	735.00
1968	1,153.00	756.00	704.00

8.7.9. Notwithstanding the fact that Mysore produces multivoltine cocoons which are smaller in size and lesser in weight and West Bengal produces mostly bivoltine and univoltine and Jammu & Kashmir only univoltine, the cocoon production per kg. of seed in Mysore in 1967 was about 55 per cent higher than in West Bengal and about 88 per cent higher when compared to Jammu & Kashmir. The performance in Jammu & Kashmir where all the seeds are tested should be if not better, at least equivalent to that of Mysore, but it is not so.

We understand that in Japan 1 kg. of seed produces 3,000 kg. of cocoons. In terms therefore of this standard, the performance of Kashmir which uses not only similar but the same seed was only 24 per cent in 1967. At the last inquiry we were informed that there were two successive failures of crops and there was import of seed from USSR which did not succeed. We could not ascertain from the State Government on this occasion the reason for the continued low yield. In the case of West Bengal the reasons for the yield being equivalent to 65 per cent of Mysore are said to be the poor strain of cocoons used for breeding purposes.

8.7.10. Other States: U.P. produced only 5.47 lakhs of disease free layings in 1968 out of which it supplied more than half to Jammu and Kashmir and used the rest for rearing which is confined to the district of Dehra Dun. In 1967 the yield of cocoons per kilogramme was 1900 kgs. which was better than in any other State and almost 63 per cent of the Japanese standards. It appears therefore that given the necessary encouragement and help there is considerable scope for the development of this industry in the hill tracts and sub-mountain regions of the State of Uttar Pradesh.

8.8. Non-mulberry Silk Worm Seed :

8.8.1. Most of the tasar silk is produced in Bihar, and Eri and Muga in Assam. The production of layings of tasar, Muga, and Eri for the years 1967 and 1968 are as follows :—

Table No. 8-14

Layings used

(In lakh Nos.)

States	Tasar		Eri		Muga	
	1967	1968	1967	1968	1967	1968
Bihar	10.00	18.41	1.12	1.31	..	..
Assam	..	..	15.00	14.94	6.70	12.00
Orissa	3.44	5.26	..	..	..	..
M.P.	5.07	4.50	..	..	—	—
A.P.	..	0.64	..	..	..	..
West Bengal	0.85	1.03	3.69	1.88	..	..
Manipur	..	..	..	..	..	0.04
Others	0.90	0.02	..	0.68	..	..
TOTAL	20.26	29.86	19.81	18.81	6.70	12.04

For the supply of tasar seeds there are 15 seed supply stations and 35 sub-stations in Bihar. Each of the station has the annual capacity of handling 10,000 layings and each sub-station that of 5,000 layings. The total number of layings produced through these stations is about 3,25,000 i.e. approximately one sixth of the total layings used. There has been a very considerable increase in the production of tasar silk seed in 1968, and most of the credit goes to Bihar. In the case of Madhya Pradesh there has been a decline in production. The seed produced in the stations and sub-stations is tested while the rest is untested.

8.8.2. There has been a decline in Eri seed, the production of which is confined mostly to Assam. This has, however, been compensated by almost two-fold increase in the case of Muga.

8.9. Production of Cocoons—Mulberry silk :

8.9.1. Rearing of cocoons from the time of hatching until the second moult is a delicate operation which needs expert handling. Since the worms can tolerate variations of temperature, humidity and feed within very narrow margins only, inexpert handling is likely to result in heavy mortality. After the second moult worms become relatively more hardy and can better withstand variations in environmental and feeding routines. It is therefore generally recommended that rearing upto second moult should be done in organised rearing centres. The extent to which rearing in organised centres has been adopted in the mulberry silk producing States, is indicated below :—

8.9.2. There has been almost no increase in the number of *Chowkis* in Mysore since the last Report. It needs, however, to be mentioned that in Mysore the races reared are multivoltine and sericulture is a whole-time occupation. The rearers have therefore acquired the necessary expertise for handling the worms in their tender and delicate stages of growth also. In West Bengal there are only eight Chowki rearing centres, but there are also 82 modern rearing houses. In Jammu & Kashmir these are called incubation centres and the Central Silk Board has reported that there are 300 such centres now working.

8.9.3. Sale of Cocoons :

In Mysore there are 73 regulated cocoons markets which have been notified under the Mysore Silk Worm Seed & Cocoon (Regulation of Production, Supply and Distribution) Act, 1959. In these markets lots of cocoons are auctioned and knocked down in favour of the highest bidders. The rearer is inserted in disposing of his

cocoons when they are at their heaviest and not fully matured, while the reelers understandably prefer to purchase matured but lighter cocoons. The Filature Committee of the Central Silk Board has recently recommended that the price of cocoons should be linked directly to the silk content or renditta, a practice which is followed in Japan. To a certain extent this practice has been adopted in West Bengal also where only nine cocoon markets operate on a voluntary basis. These are all situated within a small area. The price of cocoons is fixed by a Committee after examination of the renditta and quality of the lots offered. It has been reported that this system is working very satisfactorily in West Bengal where mulberry rearing is confined to a small area in the District of Malda. In Jammu & Kashmir, cocoons were purchased at a fixed rate which was Rs. 2.70 per kg. in 1966 but the rate is Rs. 3.50 per kg. now. As against this, the latest rates for good quality cocoons which are nevertheless inferior to those of Kashmir were Rs. 6.40 to Rs. 10.10 per kg. in February 1969 in Mysore and Rs. 6.50 to Rs. 7.00 per kg. in West Bengal. It needs, however, to be mentioned that rearer in Jammu & Kashmir has neither to pay for seed nor for mulberry leaves. The cost per kg. of cocoon for these two elements along with the price paid to rearers of cocoons as reported by the Filature Committee (1969) set up by the Central Silk Board is as follows :—

Table No. 8.15

Cost of Cocoon in Jammu & Kashmir

	Srinagar	Jammu
	Rs.	Rs.
<i>Cost per kg. of cocoon :</i>		
(a) Seed	2.08	1.77
(b) Leaves	1.49	2.44
TOTAL (a) & (b)	3.57	4.21
Price paid to rearers of cocoons per kg.	3.50	3.50
Total cost of cocoons	7.07	7.71

The Filature Committee observed that the payment to rearers of cocoons is not fixed on any scientific calculation in Jammu & Kashmir State and rearers showed lack of interest due to the price policy adopted by the Government. According to the Committee the rearers were not reluctant to pay for leaf and silkworm seed provided they were assured of an improvement in their overall earnings. At present the sericulturist in Jammu & Kashmir has no personal interest in the

maintenance of trees which yield mulberry leaves nor is he conscious of the outlay for the production of seed. It would be worthwhile to provide the rearer with greater incentive by allowing him to pay both for seed as well as for mulberry leaves and then pay him a fair price, for his cocoons. We had on the last occasion made a recommendation to the effect that as an experiment purchase of seed on payment and growing his own mulberry or purchasing rights to harvest leaf on payment may be tried in order to ascertain whether with the creation of vested economic interest for the rearer, the yield or performance improves or deteriorates. Although Jammu & Kashmir Government has not replied to our questionnaire we understand from the Central Silk Board that no such trial has been made. We would reiterate that unless the State Government takes steps to encourage the rearers by providing them with greater incentives, the future of the industry in Jammu & Kashmir does not appear to be bright.

8.10. Reeling of Silk :

8.10.1. The quantity of mulberry raw silk produced in the country by the three processes, viz. filature, cottage basins and charkha and also for dupion is as follows :—

Table No. 8.16

Raw silk production

(in kg.)

Year	Filature	Charkha	Cottage basin	Dupion	Total*
1966 . . .	1,84,720	9,79,576	3,23,284	14,702	15,02,152
% . . .	12.32	65.25	21.5	0.93	100
1967 . . .	2,01,271	9,70,204	4,81,524	16,346	16,68,345
% . . .	11.99	58.15	28.90	0.96	100
1968 . . .	1,84,891	10,99,531	4,36,671	23,828	17,44,921
% . . .	10.60	63.01	25.03	1.36	100

*Provisional.

Statewise details under each of the heads for the same years are in Appendix 4.

8.10.2. Compared to the production of 1965 there was an increase of about 7 per cent in the total production of mulberry raw silk representing a growth rate of a little more than two per cent annually. Filatures registered an increase of about 15 per cent, cottage basin 117 per cent and Charkha a fall of 12 per cent. There has been fall in dupion also which is an indication of improvement in quality of cocoons. It is heartening to observe that *the trend observed by us in the course of the last inquiry of some cottage basins switching over to charkha has been reversed*. The position of raw silk production in the chief silk producing States was as follows :—

8.10.3. *Mysore* : There are four filature units in Mysore, three owned by Government and one privately owned. Their installed capacity and production during the last four years are as follows :—

Table No. 8.17

Filature production

Filature group	Installed capacity		Actual production		
	Basins	Production capacity in kg. (Estimated)	1966 kg.	1967 kg.	1968 kg.
<i>Government owned</i>					
Mysore . .	598	71,760	41,651 (58·1)	47,339 (66·0)	52,999 (73·9)
Kollegal . .	460	48,000	26,137 (54·5)	30,230 (63·0)	34,553 (72·0)
Kanakapura . .	200	24,000	17,727 (73·9)	17,455 (72·7)	19,393 (80·8)
<i>Private</i>					
Mellur . .	52	5,400	1,331 (24·6)	1,981 (36·7)	1,132 (21·0)

(Utilisation percentages is in bracket).

8.10.4. The average capacity per basin has been estimated as between 336 to 400 grammes per day. The above figures show that all the filature units remained underutilised. In the case of the Mellur unit the underutilisation was excessive. This is said to be due to non-availability of good quality cocoons. Filatures have to compete with cottage basins as well as charkha for cocoons, and since their conversion costs are substantially higher than those of cottage basins, there is no cushion for paying higher prices in competition with the latter on purchase of raw material. The high cost of filatures tends to be accentuated by their need to purchase cheaper cocoons whose yield of silk is low.

8.10.5. The renditta obtained by each of these units during the period under review was as follows :—

Table No. 8.18
Renditta obtained at Mysore filatures

(In kgs.)

		1966	1967	1968
Mysore	.	20	19	20
Kollegal	.	19	17	19
Kanakapura	.	N.A.	16	16
Mellur	.	14	14	14

8.10.6. The number and production of charkha and cottage basins during last three years were as under :—

Table No. 8.19
Production of Cottage Basins & Charkha

	Nos.	Cottage	Charkhas	
		basin	Production (Kg.)	No.
1966	.	3,000	2,93,400	5,000
1967	.	3,250	4,57,000	4,800
1968	.	3,350	4,17,000	4,325

8.10.7. The Silk Board has informed us that the average renditta in the private filature and cottage basins is lower by 2 points and in charkha by 4 points as compared to Mysore Government filatures. In the case of charkha reeling part of the floss is also reeled into the raw silk rendering the quality uneven and less uniform. In cottage basins there is reduction of waste in reeling and any deterioration in quality is offset by the better quality of cocoons that are obtained by those reelers.

8.10.8. *West Bengal* : The filature unit of 100 basins which was under erection at the time of the last inquiry has since been set up and is working from 1966. The approximate number of charkhas and cottage basins which worked in West Bengal during the last three years were 4540 and 800 respectively. Production from the filature unit, charkhas and cottage basins during the same period was as follows :

Table No. 8.20
Total production of raw silk

(in kgs.)

Year	Filature		Cottage Basins		Charkhas		Total
	Qty.	%	Qty.	%	Qty.	%	
1966	723	Nil	28,540	9	2,79,760	91	3,09,023
1967	3,605	1	22,234	8	2,65,053	91	2,90,892
1968	1,062	1	18,605	7	2,47,989	92	2,67,656

8.10.9. There has been a progressive fall in production over the last three years. The total production in 1965 was about 311 tonnes which went down to 309 tonnes in 1966, registered a further fall in 1967 by 19 tonnes and finally came down to 268 tonnes in 1968 which is even less than the production of 1962. The fall in production is attributed to natural calamities in West Bengal during the last three years. There was in the earlier period unprecedented drought and in the subsequent one floods and landslides affected both moriculture as well as rearing.

8.10.10. No separate figures of renditta for filature and cottage basins are available but the overall renditta for each of the three years is reported to be as follows :—

	(kgs.)
1966	14.2
1967	15.8
1968	16.4

8.10.11. A fall in production need not result in deterioration in renditta but this has also been unfortunately going up. The reason for increase in renditta is said to be the poor quality of cocoons which were harvested during the period of agricultural calamities.

8.10.12. *Jammu & Kashmir*: There are no charkhas or cottage basins in Jammu & Kashmir and only two filature units exist, one in Srinagar and the other at Jammu both owned by Government. There are 584 basins at Srinagar and 165 at Jammu making a total of 749. The production of raw silk at each of these filatures during the previous three years was as follows :—

Table No. 8.21

Raw silk production in Jammu & Kashmir

Year	Srinagar	Jammu	Total	(In kg.)
1966	59,720	15,800	75,520	
1967	53,609	13,223	66,832	
1968	35,588	12,109	47,697	

The overall renditta for each of the three years was as follows :—

	(kgs.)
1966	14.3
1967	10.8
1968	11.0

As mentioned earlier the Jammu & Kashmir Government did not respond to the enquiries made by us and we could not therefore ascertain the reasons for such remarkable improvement in renditta in one year when there was a heavy fall in production. Nor could the reason be furnished by the Central Silk Board. It is, however, doubtful if there could be such a steep fall in the course of only two years. The production in Jammu & Kashmir has also been steeply going down. For during the last twenty years raw silk production has never been as low as it was in 1968. Silk production went up from about 60 tonnes in 1949 to about 81 tonnes in 1956. Then it started falling and came down to 62 tonnes in 1959. It went up again to 98 tonnes in 1962 and has been falling with spurts in alternate years. As against the production of 1962 the production of 1968 was only about 48 per cent. *The condition of the silk industry in Jammu & Kashmir appears to be very precarious and unless immediate steps are taken to retrieve lost ground the future appears to be gloomy.*

8.10.13. Position in univoltine States :

Himachal Pradesh : The filature unit in Nurpur was transferred from Punjab to Himachal Pradesh in 1966 but started working only in 1968 and recorded the production of 1057 kgs. in that year.

8.10.14. Punjab : Punjab produced 1398 kgs. in 1966, 1437 kgs. in 1967 and 2118 kgs. in 1968. Most of the production was from charkha and only a small quantity from cottage basins.

8.10.15. Uttar Pradesh : There is very little charkha or cottage basin silk in U.P. and most of the production comes from the filature unit in Dehra Dun. The total production in 1966 was 2978 kgs., 3220 kgs. in 1967 and 2920 kgs. in 1968. The Filature Committee of the Central Silk Board which submitted its Report in 1969 has observed that the industry has been organised on sound lines in the State of Uttar Pradesh and the progress made in the development of seed organisation has been significant. It goes on to state that the most redeeming feature of silk reeling in Uttar Pradesh is the absence of charkha, availability of better cocoons and organisation of filatures run on co-operative lines. These factors favour the production of fairly high quality silk in comparison with the other indigenous qualities. The Committee has further recommended that the reeling of the silk should continue to be confined only to the filature system in U.P. It need also be mentioned that the only filature unit which is being run profitably in India is that of U.P. all the other Government filature units being run at a loss.

8.10.16. Of the total mulberry raw silk production in the country charkha still accounts for more than 60 per cent though it has been steadily going down and is being replaced by cottage basin. The share of filature has been fluctuating between 10 and 12 per cent. Reeling by Charkhas is the most rudimentary and primitive process and the production therefore suffers from defects such as lack of uniformity of denier, insufficient and irregular twisting etc. Cottage basins produce better silk than charkha. Filatures provide the method of securing raw silk of the right grade and uniform texture and denier. However, almost all the filatures except the one unit in U.P. are uneconomic and notwithstanding the premium in price available to them they cannot compete with the charkha and cottage basins. Efforts have been made in the past to seek the reasons for the lack of viability of filatures and various suggestions were made for improvement. It was observed on the occasion of the last inquiry that producers of silk were finding charkhas more economical and were in some cases shifting from cottage basins to charkha. On earlier occasions it has been suggested that filatures were uneconomic and not suited to the conditions prevailing in the country. The Commission had therefore recommended a careful and thorough probe into the working of the filatures in India in order to discover the underlying causes for their uneconomic operations. As a result of this recommendation the Central Silk Board constituted a Filature Committee in 1967.

8.10.17. The Committee submitted its report in two parts one in 1968 and the other in 1969 and the Central Silk Board has made the report available to us. The Committee found that the charkha system of reeling did not admit of standard quality of silk production and the silk reeled on charkha suffered from lack of evenness, cleanliness, cohesion and winding qualities, that the production techniques adopted in the cottage basins were more or less similar to those of the filatures, and the quality of silk produced on cottage basins was superior to charkha silk and in some cases could even compete with filature silk. It found that the cost of cocoons was the predominant element in the cost of Silk production, that the advantages accruing to the private filature units and charkha reelers on account of their paying lower wages and employment of workers on intermittent basis without observing the provisions of Minimum Wages Act encouraged them to offer unhealthy competition in the cocoons market by pushing the prices to higher levels; that the renditta in private cottage basins was lower by two points and in charkha by four points as compared to filatures. The cost of cocoons per kg. of silk produced was therefore higher in the case of filature than domestic basins and charkha. On the score of renditta alone the Mysore Government filatures suffered a disadvantage of Rs. 19 to Rs. 25 per kg. of silk as compared with the cottage

~~basin~~ and charkha. Owing to the necessity of observing labour laws the cost per kg. of silk produced by the filatures exceeded the labour cost in the cottage basin and charkha by Rs. 15 to Rs. 20 per kg. Under the item of "overheads" these filatures were incurring an expenditure of about Rs. 17 per kg. more than of cottage basin. On the whole Government silk filature in Mysore suffered a disadvantage from Rs. 42 to Rs. 62 per kg. of silk or an average of Rs. 48 as compared to domestic basins. On the other hand the market could only absorb a maximum price differential of Rs. 10 per kg. between domestic basins and filatures and Rs. 20 as between charkha silk and filatures silk. This left the filatures with a disadvantage ranging from Rs. 28 to Rs. 38 per kg. The filatures were therefore not likely to break even. On an optimistic estimate, for every kg. of Government filature silk produced there would be a loss of at least Rs. 20 per kg.

8.10.18. We had occasion earlier to point out the disparity in mulberry production as well as the renditta of the Indian cocoons when compared to corresponding figures of Japan. The economy of mulberry leaf production as well as cocoon production in India is still attuned to the cottage level of production and the lack of efficiency at these levels can be masked only by the production of sub-standard qualities. It becomes exaggerated the moment the high cost of the production of mulberry leaves, low productivity from seed and the low renditta is manifested through modern filature processes. In other words, the disadvantages of low productivity are neutralised only by primitive sub-standard processes and products in which more waste is used and labour is not fully remunerative.

8.10.19. It would therefore be shortsighted to denounce filature as uneconomic and attempt to revert to cottage basins or low quality charkha silk. The need in reality is that of conducting mulberry leaf production on scientific lines, improvement of renditta by hybridising better strains of cocoons reduction of losses on account of mortality, ensuring disease free layings as measures complementary to the reeling of silk through filatures. It would be retrograde to advocate closing down of filatures and reverting to charkhas only because we are unable to improve the productivity of mulberry leaves or of cocoons of the right quality. It is necessary instead to go to the core of the problem and resolve it at the level where real improvement can be made. It has been ascertained that the cost of reeling in India is almost the same as in Japan and Korea but other countries have a greater advantage owing to better yield of mulberry leaves and better quality of cocoons. The Filature Committee has also come to the conclusion that unless the quality of reeling cocoons is improved by introduction of new races of silkworms having longer filament length

and greater neatness and quality, it would not be possible for the filatures in Mysore State to produce high grade raw silk comparable to international 'AA' or 'A' grade and it has further recommended that the Mysore filatures should continue to work on account of the important part played by them in the overall interest of the sericulture and silk weaving industry as well as in the context of export promotion, that notwithstanding losses the Government filatures should be maintained and that the losses suffered by the filatures should be subsidised as a developmental assistance to the filature industry by the State as well as the Central Government. We are inclined to agree with the conclusions reached by the Filature Committee and would strongly recommend that the problem be tackled at the basic level of production of mulberry leaves and cocoons. We believe that with the necessary improvement not only would filatures be rendered economic, the lower cost of cocoons will discourage exploitation of labour in cottage basins and also sub-standard production. Charkhas would in course of time be replaced by cottage basins as has happened in Japan, Korea and Russia, and in their turn cottage basins would be replaced by filatures. Until then the filatures will need to be subsidised. There are however a few minor improvements which can forthwith be made in the case of filatures too such as maintenance of cost accounting, purchase of selected and better quality cocoons by operating in markets where good cocoons are available.

8.10.20. As mentioned earlier the position of the industry in Kashmir is rather precarious. The Filature Committee has in the case of this State come to the conclusion that the main problems faced by the industry are the non-availability of adequate quantity of mulberry leaves, absence of sufficient incentive to the rearers of silkworms to ensure maximum yield of cocoons of good quality, lack of interest on the part of silkworm rearers due to the present policy of procurement of cocoons and unsatisfactory return for their labour. It is estimated that a rearer gets a remuneration of about Rs. 65 annually or Rs. 5.40 per month which at the existing levels of prices is altogether unattractive. It appears that only the poorest sections of the community continues therefore to rear cocoons and even they have neither the flair for it nor the stamina to do it well. By slow degrees the inadequate, recompense is driving out better placed rearers who prefer to utilise their time more gainfully. We understand that the return from sericulture is so unremunerative that many of the farmers pretend to be rearers and obtain seed from Government only to be able to get leaves from mulberry trees for feeding their goats and sheep and to get fuel from the branches which are hacked away from the trees instead of twigs and leaves.

8.10.21. The Filature Committee has therefore recommended that a rational purchase policy of cocoons is the most important pre-requisite for the development of the industry in the State and has also recommended that a system of price fixation should be introduced which would enable the rearers to get a price according to the quality of cocoons harvested. For the rearers were not averse to pay for the leaf and silkworm seeds provided they were assured of an improvement in their overall earnings they should be paid a price which would infuse a spirit of competition besides encouraging them to improve production both in respect of quality and quantity. Today the payment to the rearers which is Rs. 3.50 per kg. is not fixed on any scientific basis by taking into account the general trends of agricultural wages. The fall in the availability of cocoons has resulted in Jammu filatures lying idle from three to four months in a year and Srinagar filatures from five to six months. It has also suggested that instead of the bulk of the production of raw silk being supplied to quota holders at concessional prices the raw silk should be sold in the open market at competitive prices. We would reiterate the recommendations made by the Commission on the last occasion and sound a note of warning that unless effective steps are taken to rejuvenate the industry in Jammu & Kashmir it would not be a matter for astonishment if the industry disappears altogether from this State within the next ten years or so.

8.10.22. Non-mulberry silk industry :

8.10.22.1. The production of non-mulberry silk during the previous three years was as follows :—

Table No. 3.22
Non-mulberry silk production

Year	Tasar		Eri		Muga		Non-mulberry (kg.)	Total
	Qty. (kg.)	Percen- tage to total	Qty. (kg.)	Percen- tage to total	Qty. (kg.)	Percen- tage to total		
1966	2,68,070	49.1	2,07,842	38.4	68,004	12.5	5,43,916	
1967	2,80,938	50.1	2,11,429	37.6	69,000	12.3	5,61,367	
1968	2,89,706	50.7	2,11,680	37.1	70,203	12.2	5,71,589	

The Statewise production of different varieties of non-mulberry silk is given in Appendix 5. There has been an all round improvement in the production of non-mulberry silk which is creditable.

8.10.22.2. *Tasar silk industry :*

While production has not substantially improved in Madhya Pradesh and has progressively gone down in West Bengal, it has shown considerable improvement in Orissa.

8.10.22.3. *Eri :*

Assam continues to be the chief producer of eri silk. The production in Bihar has gone down from 6,590 kg. in 1966 to only 1000 kg. in 1968. There has been a slight improvement in the case of West Bengal.

8.10.22.4. *Muga :*

Muga silk is about 12 per cent of the total non-mulberry silk produced and this comes almost entirely from Assam where it has shown progressive improvement in the last three years.

Silk Waste :

8.11.1. The production of silk waste during the last three years was as follows :—

Table No. 8.23
Production of silk waste

					(In kgs.)
					1966 1967 1968
Filature	.	.	.	.	1,14,415 1,34,338 1,20,352
Cottage basin	.	.	.	.	1,56,970 2,19,772 1,59,800
Charka	.	.	.	.	3,79,416 3,63,425 4,34,368
Dupion	.	.	.	.	1,618 2,285 5,797
A TOTAL	.	.	.	.	6,52,419 7,19,820 7,20,317
Tasar	.	.	.	.	1,73,076 1,59,204 1,52,054
Eri	.	.	.	.	65,767 66,647 68,269
Muga	.	.	.	.	23,000 22,000 25,001
B TOTAL	.	.	.	.	2,61,843 2,47,851 2,45,324
GRAND TOTAL A AND B (in thousands)					914 968 965

8.11.2. Waste silk from filature constitutes about 65% of the production of raw silk. It is lower at about 45% in the case of cottage basin and lowest in the case of charkha at 38%. The average works out to about 43% of the total raw silk produced. The rest of the weight of the cocoon consists of the pupae and other non-textile wastes. Some of the mulberry silk waste and most of the non-mulberry silk waste, is used for hand-spinning. Appendix 6 gives State-wise production of silk waste of all types for the last three years.

8.11.3. The average price at Channapatna for mulberry silk waste in 1968 was Rs. 12.84 per kg. and non-mulberry silk waste in Assam was Rs. 13 per kg. The bulk of the silk waste produced in the country is still exported as the following figures would show :—

Table No. 8.24
Export of Silkwaste

(In tonnes)

Year	Produced	Exported	Bercent-
			age of total produc-
1966	914	751	70
1967	968	668	67
1968	965	428	57

Of the balance a small quantity is used for hand-spinning and the rest processed by the two silk spinning mills, one at Channapatna in Mysore and the other at Jaggi Road in Assam. The current indigenous prices of spun silk yarn are as follows :—

Table No. 8.25
Price of spun yarn and noil

(Rs. per kg.)

	Range	Average Rs.
<i>Mulberry silk yarn—</i>		
Spun yarn	2/2 110
Noil yarn 23
<i>Non-mulberry silk yarn—</i>		
Eri yarn	2/140
Muga yarn	2/140
Noil Eri 28
Noil Muga 38

8.11.4. The average realization per kg. of silk waste after it has been converted into yarn or noils is about 29. As against this the cost of the raw material is Rs. 12.50. Of the balance conversion costs are about Rs. 9.50 and Rs. 7 is return per kg. of waste. The capacity and production of the two silk spinning mills during the last three years were as follows :—

Table No. 8.26

Capacity and production of spinning factories

Silk spinning mill	Capacity on double shift			Production			Percentage of capacity utilised			
	For noils	For spun Yarn	Total	Year	Noil	Spun yarn				
Channapatna, Mysore	90,000	66,600	1,56,600	1966	40,470	39,554	80,024	44.9	59.4	
Jaggi Road, Awan	24,000	34,000	58,000	1965	1967	38,603	33,904	72,507	42.9	50.9
				1968	50,192	40,141	90,333	55.7	60.3	
				1967	21,207	19,204	40,411	88.3	56.5	
				1968	18,747	20,699	39,446	78.1	60.9	
					21,447	20,914	42,361	89.3	61.5	

In terms of the utilisation of silk-waste the position was as follows :—

Table No. 8.27

Utilization of silk waste by factories

Year	Utilization of silk waste				Total	Total by units		
	Mulberry	Non-Mulberry	Total					
			Channa-patna	Jaggi-Road				
1966	1,98,330	74,956	Nil	47,489	3,20,775	2,73,286		
1967	2,15,384	44,031	Nil	67,785	3,27,200	2,59,415		
1968	2,30,639	34,677	Nil	64,269	3,29,585	2,65,316		
						64,269		
						2,30,639		
						98,946		

8.11.5. The comparative figures for export and utilisation for spun yarn are as follows :

Table No. 8.28

Export and indigenous use of silk waste

(In Tonnes)

Year	Quantity				Total	% of Col. 2 to Col. 5
	exported	spun by Mills	spun on charkha			
1	2	3	4		5	6
1966	.	751	321	40	1,112	68
1967	.	668	327	40	1,035	65
1968	.	428	330	40	798	54

There is a certain degree of discrepancy between the figures of production given on table 8.24 and the above table. This is partly due to stock held over from previous year, and partly to estimations of production not being accurate. Considerable stocks have been held over from the year 1968. The annual capacity of the Government Spun Silk Mills, Channapatna, for processing silk waste, on two shift basis, is 600 tonnes and that of Assam Silk Mills, Jaggi Road is 180 tonnes making a total of 780 tonnes. The actual utilisation during the last three years by both mills together was however less than 50% and stood at 321, 327 and 330 tonnes respectively. Both in 1966 and 1967, more than double the quantity utilised in the country was allowed to be exported. There is a linking arrangement for export under which the exporter collects silk waste from reeling centres and has to supply a quantity equal to that exported for the needs of the spun mills. In spite of this arrangement the Assam Spun Mills has stated that it is facing difficulty regarding availability and prices of silk waste since the suppliers always try to export first and then go in for local supply, as a result of which prices go up. It would appear, therefore that under the present system the linking ratio is not at all helpful, since the quantity is limited to a certain level beyond which there is no incentive for the exporter to supply the requirements of the units. The representative of the Mysore Government who is the Director of Sericulture and also in charge of Channapatna Silk Spinning Mill stated at the public

inquiry that because of these exports the mill at Channapatna could not utilise more of silkwaste. He added that it was possible to consume the quantity available in the State to run the mill and that it would be preferable for the entire output of silk waste being indigenously converted into semi-processed material instead of the bulk being exported.

8.11.6. The Central Silk Board had set up in 1967 a Silk Waste Committee which submitted its report in August 1968. That Committee has also come to the conclusion that adequate supplies of silk waste were not available to the existing mills and suggested modification of the linking ratio so that for every one kilogramme of silk waste exported two kilogrammes of silk waste be made available to the spun silk mills. We find that while the Mysore Government is incurring losses on filatures it has been able to make reasonable profits from the spun silk mills. For the cost of production of the spun silk including the cost of raw materials is considerably lower than what the market is prepared to offer for the end product. *As spun silk yarn has also a substantial export market there are obvious advantages even from the export point of view in seeking to internally convert all the available silk waste and then exporting it. We would accordingly suggest an early review of the existing export policy in this matter and would go to the extent of recommending further augmentation of installed spinning capacity if this becomes necessary for the purpose.*

8.12.1. Weaving :

At the time of the last enquiry it was reported that there were 1,23,313 handlooms and 2852 powerlooms. The Central Silk Board has now reported that there are 1,25,000 handlooms and 3,000 powerlooms. Since no survey has been undertaken, it is not possible to ascertain the State-wise details of the handlooms and powerlooms. By far the largest number of units are located in U.P., Assam and Tamil Nadu. Mysore has most of the powerlooms.

8.12.2. Production of silk fabrics :

The Silk Board had estimated the production of 29.71 million square metres of silk fabrics in 1965. This was based on certain assumptions with regard to the weight of raw silk used. On the same basis the total production in 1968 would be of the order of about 32.00 million square metres.

8.12.3. Plan schemes :

Plan schemes are broadly classified into those for (i) the State Governments and (ii) the Central Government institutions. In the case of the latter the beneficiaries are the Central Silk Board, its subsidiary organisations and the Central Sericultural Research Station,

Berhampore. Amounts under the former are supplied for the purpose of development of sericulture in the States and for financing farms, grainages and such other schemes. The State Government has to provide a matching amount to that offered by the Central Government. The Central Government's contribution is in the form of grant as well as loan. The amounts therefore spent on plan schemes are 25% from the budget of the State Government, and 50% from that of the Central Government, the remaining 25% being provided by the Central Government in the form of loan. Allocations are made well in advance of the Plan or annual Budget as the case may be, and the State Governments are expected to apply for the amount needed by them after they have decided upon the funds which they can spare. The allocations as well as expenditure by the various States during the Third Five Year Plan are given in Appendix 7. Out of Rs. 552.010 lakhs allocated for the State Schemes only an amount of Rs. 350.253 lakhs was utilised. The figures for the subsequent years are as follows :—

Table No. 8.29

Plan allocation and utilisation by states

Year	Amount allocated (Lakh Rs.)	Amount utilised (Lakh Rs.)
1966-67	106.600	64.721
1967-68	225.125	79.918
1968-69	144.030	77.957*

*(Figures for Jammu & Kashmir and Assam are not complete).

We observe that the increase in the expenditure by the States in 1967-68 was only of a small order, and not proportional to the increase in allocation. The allocation for 1969-70 is Rs. 164.3 lakhs. There is at present a certain amount of imbalance between the States' share in total production and in the Plan allocations. Jammu & Kashmir produces only about 2% of the silk but about 24% of the funds were allocated to it in 1968-69 while Mysore's share is only 35% in the allocation as against the production of 61%. We understand that this disparity can be remedied provided that the State Government having a proportionately smaller share in allocation agrees to make the matching outlay from its own funds.

8.12.4. Central Government Schemes :

The allocation and utilisation of funds under the Central Government Schemes for the three years from 1966-67 to 1968-69 was as follows :—

Table No. 8.30

Central Schemes—Allocation and utilisation

Year	Allocation made Rs.	Amount utilised Rs.
1966-67	29,59,000	29,27,000
1967-68	30,20,000	28,79,000
1968-69	26,30,000	27,00,000

9.1. Availability in the context of world production :

Because of its richness and the fineness of its texture, silk has always been the fabric of choice for elegant attire particularly for feminine apparel. Except in the case of the very ~~maud and ava~~ rich and for certain items such as hosiery for women ~~ibility~~ the use of silk fabrics has been restricted to festive occasions and not as daily wear. Its share has however never exceeded one per cent of fabric fibre production and consumption and is now much lower, owing to the introduction and widespread production of man-made fibres. At the beginning of the present century the total world production of textile fibres was about 3924 million kgs. of which silk accounted for only 17 million kgs. or only 0.49. Between 1925 and 1941 however, raw silk production and use increased reaching a peak in 1929. In that year the total textile fibre production was 7410 million kgs. of which raw silk was about 61 million kgs. this doubling its proportionate contribution to 0.8 per cent. Of the balance cotton accounted for 82%, wool 14% and man-made fibres 3%. During the second World War there was decline in silk production from 1941 to 1945 particularly owing to a sharp fall in production owing to Japan's pre-occupation with the war. In the latter year the total world production went down to the all time low of about 11 million kgs. only. The position improved after the war and production reached 31 million kgs. in 1956 and has more or less been the same since then. In 1967 it was estimated to be 31 million kgs., which is about half the production in 1929.

During the last four decades the production of textile fibres has more than doubled, but that of silk was almost halved as the following figures would show :—

Table No. 9.1
World Production of Textile fibres

Year	Cotton	%	Wool	%	Man-made fibre	%	Silk	%	Total	('000 tonnes)	% of variation
1929	6,124	82	1,023	14	202	3	61	1	7,410	..	
1967	10,159	57	1,559	9	6,159	34	34	..	17,911	+142	

9.2. In India the position during the same period at intervals of ten years was as follows :—

Table No. 9.2
Domestic production of textile fibres

Year	Cotton	%	Man-made fibre	%	Wool	%	Silk	%	Total	('000 Tonnes)	% of increase
1929	370	97	Nil	Nil	N.A.	3	1.04	..	371	100	
1939	575	97	Nil	Nil	N.A.	3	0.71	..	576	155	
1949	618	97	Nil	Nil	N.A.	3	1.32	..	619	107	
1959	915	93	37	4	33	3	1.52	0.2	985	159	
1967	997	89	94	8	35	3	2.23	0.2	1,128	122	

[For wool % has been assumed for 1929, 1939 & 1949. Between 1929 & 1967, the total increase was that 304 or an average annual rate of about 11% as against the world average of 6%.]

9.3. India contributes 5.5% to the total world production of textile fibres and about 5.2% to that of silk. World production of silk is .2% of the total of textile fibres the Indian proportion is also the same.

9.4. Though silk is still used for luxury garments, some of its uses for more common vestments such as stockings have almost entirely been replaced as the following figures for stocking material used in the U.S.A. would show :—

Table No. 9.3
Shift from silk to nylon for hosiery

Year	Silk	Rayon	Nylon	Others
1929	98%	Nil	Nil	0·2%
1954	0·2%	1·3%	97·1%	1·7%

9.5. In terms of price of yarn the comparative position in the Indian market is as follow :—

Table No. 9.4
Comparative prices of textile fibre

Textile Fibre Yarn	Unit	Quality	Rate per kg. (Rs.)
Rayon yarn . . .	120 Denier	Bright	11·00
Synthetic yarn . . .	105 Denier	..	49·50
Cotton yarn . . .	60 Counts	..	12·10
Wool yarn . . .	2/48*	..	62·28
Raw Silk . . .	20-22 Denier	..	156·00

9.6. *Indigenous production* : Reliable statistic about production of raw silk in India before 1931 are not available. However the rate of growth between 1931 and 1949, i.e. a period of 18 years, was approximately 9.00 tonnes annually on an average. Then there was a fall in production between 1949 and 1954 of the order of about 6.00 tonnes annually. During the eight years from 1954 to 1962 the rate of growth sped up and registered an average of 58 tonnes annually. During the three years from 1962 to 1965 this was more than doubled at 124 tonnes annually. In the course of the last three years however it has not been so phenomenal and has come down to about 55 tonnes annually.

9.7. Almost no raw silk is exported, and the availability is therefore confined to indigenous production and imports, the position of which during the last three years was as follows:—

Table No. 9.5

Availability of raw silk

(In tonnes)

Year	Indigenous production			Imports	Availability
	Mulberry	Non-Mulberry	Total		
1966	1,502	544	2,046	45	2,091
1967	1,668	561	2,229	42	2,271
1968	1,745	572	2,317	37	2,354

9.8. The demand of any commodity can be estimated in relation to the need of the consumers based on a reasonable expectation of its fulfilment. In the case of raw silk its need as a textile fibre is a fraction of one per cent of the total requirement of textile fibres. Again raw silk is needed by those who manufacture textiles and the textiles are the final product which are consumed. A reasonably exact correlation between the quantity of raw silk available and the textiles produced cannot be made owing to the multiplicity of the products and the varying quantities of raw silk needed for their production. This holds good not only for the raw silk used for textiles consumed in the domestic market but also for the textiles which are exported. An assessment of the demand could only be made in terms of the total quantity of the fabric needed and then only by working back can any assessment of demand for raw silk be formulated. This for the reasons mentioned above is not easy and it would be reasonable to assume that requirement would depend upon availability, which is closely related to domestic production.

9.9. With the increase in the production of synthetic fibres, which aspire to incorporate characteristics and refinement of silk, it would be more desirable to discourage internal consumption of silk and develop exports to the largest possible degree, the aim being to export most of the silk produced for the affluent markets of the world instead of using the fabric in the country.

10.1. Standards : The Indian Standards Institution has published eleven standards for raw silk. These relate to visual and factual examination, determination of condition, weight and size, winding test, evenness and neatness, tenacity, elongation and cohesion. The twelfth standard published in 1968 relates to the method of determination of scouring loss in silk textile materials. No standards for cocoons have so far been published. In view of the general complaints about quality and lack of uniformity of the raw silk supplied by filatures *we would recommend that the filatures may join the I.S.I. certification marking scheme.*

10.2. Quality : At the time of the Commission's last inquiry there were complaints about the lack of uniformity and evenness in the indigenous raw silk, variation in thickness in terms of denier and tensile strength, greater degumming losses and in adequacy of lustre. We have received comments from a number of consumers in the course of the present investigation and the matter was also discussed at the public inquiry. The Banaras Industrial & Trade Centre, Varanasi, one of the consumers' Associations has stated that there has been an appreciable improvement in the quality of silk supplied by Jammu and Dehra Dun units. In the case of supplies from Mysore and Srinagar the denier on the label was always found to be incorrect and the quality not uniform. In summer unwinding was difficult. The Surat Zari Merchants' Association has stated that no improvement has been effected in the indigenous product and that it continues to be very uneven. Individual consumers have commented adversely on the quality of Indian silk. One of the chief producers of silk textiles has said that not only the quality varies from bale to bale, but from skein to skein. The silk is uneven, full of gum, breakages in winding are frequent, waste occurs and losses multiply. At the public inquiry it was revealed and was also sought to be established with the help of a number of declaration forms that the denier entered on the declaration form was different from that of the silk content in the "book". It has been contended by consumers that the defects in filature silk are due not only to the poor quality of cocoons but also owing to lack of adequate supervision and inefficient reeling at the Government filatures and absence of quality control. In support of this contention, it has been stated that raw silk produced by cottage basins has in a number of cases been found to be superior to and more uniform in quality than of Government filatures notwithstanding the fact that basin owners also faced the same problems in the matter of raw material and other working conditions. It has been stressed that cottage basins being more quality conscious produced in a number of cases better raw silk than Government filatures.

10.3. The representative of the Government of Mysore stated that declarations on the labels were based on the tests made on a random basis by the testing house at Mysore. It was, however, agreed that the testing house at Mysore was not equipped with upto-date machinery for testing in accordance with ISI or international specifications as it did not possess a conditioning house providing the requisite temperature and humidity for testing operations. The same, it appears, holds true of the testing house in Calcutta. Efforts are, however, being made to bring the test houses to the requisite standards and to make the tests more scientific and correct. It was pointed out that even where the quality of the silk was not the same as declared, the supplier was not prepared to modify the rate conforming to the quality actually supplied. There are no standards of quality at all for charkha silk and it is taken for granted that raw silk produced by charkha units is generally of poor quality.

10.4. We are alarmed by the fact that not one independent opinion was offered in support of the quality of Indian raw silk and are constrained to remark that the quality instead of improving appears to have deteriorated since the last inquiry. The practice of charging a higher price even if it is proved to the satisfaction of both the seller as well as the buyer that the contents do not conform to the quality or specification declared is not a fair one. The rates charged should in such cases conform to those of the actual quality supplied. It is difficult to understand why steps were not taken to equip the testing houses properly particularly when large sums are available for the purpose to research institutions and the Central Silk Board. We hope that this serious shortcoming will be removed most urgently so that the testing may be rendered scientifically correct and acceptable.

Sericultural research is conducted at the Central Sericultural Research Station, Berhampore, Central Sericultural Research and Training Institute, Mysore, Central Tasar Research

11. Research and Training Station, Ranchi and Sericultural Research Station, Titaghur. In addition there is a Central Silk Worm Seed Station at Pampore near Srinagar. The

research programmes of these institutions are reviewed and guided by the Research Co-ordination Committee of the Board consisting of scientists drawn from all over the country. A crash programme has recently been initiated with a view to determining the suitable multi-voltine and cross-voltine silk worms to be popularised in the agricultural districts. Experiments are also being conducted for evolving breeds of silk worms and improved varieties of mulberry. During the last three years post-graduate training was imparted to 50

students of whom three were foreign students at the Central Sericultural Research Institute, Mysore. We would, in this context, invite attention again to the recommendation we had made in our previous report (para 9.7.2) regarding the need for programmes for the utilisation of the results of research. It would be useful to attach small Extension Wings to each Research Station for undertaking field trials and other propagation work.

12.1. The selling price of cocoons in the different States, as 12. Selling Prices reported to us by the Silk Board and the State Governments per kilogramme were as follows:—

Table No. 12.1

Selling Price of Cocoons

State	1966	1967	1968
Mysore (Channapatna)	5.66 to 7.22	7.59 to 9.22	7.12 to 9.65
West Bengal (Malda)	3.41 to 3.72	6.84 to 7.83	4.17 to 6.89
Jammu and Kashmir	2.70	3.08	3.50

12.2. In the case of Jammu and Kashmir the rearer does not have to incur any cost on seed or mulberry. If these costs are included the price would work out to about Rs. 7.30 including the estimated cost of mulberry leaves and laying as determined by the Filatures Sub-Committee.

12.3. At the time of the last enquiry the figure adopted for selling price of cocoons for the purpose of our estimates of costs was Rs. 5.17 to Rs. 6.43, for filature units in Mysore. As against the actual prices which ruled in the market in 1968 were Rs. 7.12 to Rs. 9.65.

12.4. Selling prices of filature silk produced in Mysore, West Bengal, Jammu & Kashmir and U.P. for 20-22 denier were as follows :—

Table No. 12.2

Prices of Filature Silk

Name of Filature.	Specifica- tion	1966-	1967-	1968
1. Government Silk Filatures, Mysore	20/22	97.50 to 139.00	148.00 to 156.00	145.00 to 156.18
2. Kisan Silk Industries, Mclur .	20/22	110.00 to 160.00	160.00 to 165.00	150.00 to 178.00
3. Government Silk Filature, Srinagar	20/22	100.00 to 135.05	125.00 to 135.05	120.00 to 173.00
4. Govt. Silk Filature, Jammu .	20/22	113.25 to 151.51	113.25 to 151.51	115.00 to 194.00
5. U. P. Resham Andyogic Saha- kar Sangh Ltd., Dehra Dun.	20/22 Bivoltine raw silk	105.00 to 135.00	145.00 to 191.00	158.00 to 193.00
	20/22 Multivol- tine raw silk	99.00 to 103.00	120.00 to 147.00	107.00 to 146.00

12.5. Raw silk prices of charkha and cottage basins during the last three years were as follows :—

Table No. 12.3

Raw Silk Prices of Cottage basin & Charkha

State	1966		1967		1968	
	Charkha	Cottage	Char-kha	Cot-tage	Char-kha	Cot-tage
Mysore . . .	92.86 to 119.40	101.57 to 144.04	120.81 to 155.04	142.15 to 185.00	107.81 to 152.30	143.33 to 185.00
West Bengal . . .	56.67 to 109.40	84.00 to 168.75	97.50 to 130.00	116.25 to 132.40	93.23 to 135.00	103.33 to 130.06
Bihar . . .	85.00	..	95.00	..	104.00	..
Tamil Nadu . . .	80.95 to 125.00	105.00 to 120.00	100.00 to 120.00	130.00 to 135.00	148.00 to 165.00	135.00 to 155.00

12.6. The selling price of non-mulberry silk for the States of Assam and Bihar were as follows :—

Table No. 12.4

Prices of non-mulberry Silk

State	Type	1966	1967	1968
Assam	Eri (Hand-spun) Muga.	146.59 to 159.77	160.00 to 165.00	180.00 to 230.00
Bihar	Eri (Hand-spun) . .	61.50 to 125.00	57.50* to 75.00	70.00* to 95.50
	Muga	160.00 to 165.00	160.00 to 165.00	160.00 to 260.00*

*Prices of twisted yarn.

12.7. Spun Silk Yarn :

The latest operating prices of the Government Spun Silk Mills at Chennapatna for different classes of yarn were as follows :

Table No. 12.5

Prices of yarn

	1-8-66	15-11-66	15-11-67	1-4-68	26-8-68
<i>Spun Silk Yarn :</i>					
2/210s special	85.00	95.20	111.00	116.55	130.00
2/210s . .	..	80.00	104.00	109.20	120.00
2/140s special .	83.00	93.00	109.00	114.50	122.00
2/140s . .	75.00	84.00	100.00	105.00	112.00
2/100s . .	67.00	75.00	90.00	94.50	105.00
<i>Noil Yarn</i>					
10s . . .	25.50	28.60	28.60	28.60	28.60
7s . . .	20.00	22.40	23.00	23.00	23.00
5s . . .	14.00	15.70	16.00	16.00	16.50

Note.—Prices are not ex-Chennapatna, Mysore State, and are inclusive of sales tax, packing and forwarding charges.

The prices of the Spun Silk Mills at Jaggi Road reported to us were as follows :

Table No. 12.6

Prices of yarn

	1-8-1966	1-12-1966	15-12-1967	1-5-1968	1-10-1968
<i>Mulberry Yarn :</i>					
2/240 (SS Yarn)	87.00	102.00	120.00	138.00	138.00
2/240 (SS Yarn)	80.00	85.00	104.00	118.00	128.00
2/140 (SS Yarn).	75.00	84.00	100.00	110.00	116.00
10s (Noil Yarn)	25.00	28.60	28.60	28.60	30.00
7S (Noil Yarn) .	19.84	..	24.25	23.00	25.00
<i>Eri Yarn :</i>					
2/140 (SS Yarn)	69.50	79.00	93.00	97.65	101.00
2/60 (SS Yarn)	46.00	54.00	68.00	71.40	74.00
10s (Noil Yarn)	23.00	26.50	26.50	26.50	28.25
7s (Noil Yarn)	18.00	21.00	21.00	20.00	22.00
<i>Muga Yarn :</i>					
2/140 (SS Yarn)	90.00	95.00	110.00	120.00	120.00
7s (Noil Yarn)	38.00	38.00	38.00	38.00	38.00

13.1. Import Control Policy in respect of protected items of sericulture has been set out under Serial Nos. 172, 173, 175, 176, 184 and 189 of the Import Trade Control Policy published by the Ministry of Foreign Trade and Supply. Imports of all types of silk yarn, silk sewing thread and silk fabrics have been banned since October-March 1968. However, raw silk has been allowed to be imported. At the time of last inquiry, imports of raw silk were being allowed against export entitlements. Almost the same policy has been continued since then. Broadly speaking, 35 to 40 per cent of the value of exports is allowed for import of raw silk in the case of silk fabrics and readymade garments. The rates of entitlements are lower for fabrics or garments having less than 50 per cent mulberry silk. During the current year the imports of noil yarn and nep noil yarn are also being allowed under export entitlements. The table below gives the quantity and value of raw silk imported during 1966, 1967 and 1968.

Table No. 13.1
Imports of raw silk

		Quantity in tonnes	Value in lakh Rs.
1966	.	45	44.64
1967	.	42	54.67
1968	.	37	51.21

13.2. In addition to raw silk, the Central Silk Board has informed us that silk worm seed were also imported by Jammu & Kashmir Government to augment their production of univoltine seeds. Details of import of silk worm seed are given below :—

Table No. 13.2

Imports of seed

	Quantity in Kg.	Value in lakh Rs.
1966—67	340.2	7.47
1967—68	340.2	7.01
1968—69	170.1	3.17

During the public inquiry, we were informed by the interests concerned that no imported raw silk is in fact being utilised for the fabrics which are being exported, nor is it economical to use this silk even as warp. Further, we find from the data available from the Central Silk Board that the average landed cost of imported silk was about Rs. 201.08 per Kg. in 1968 but in the Varanasi market it was being sold at about Rs. 269 per Kg. in May 1969. This leaves a very large profit margin for importers of raw silk. It has been argued that certain specialised sectors of the silk industry and the zari industry require imported raw silk. *We are not fully convinced about the necessity of importing raw silk to cater to the domestic market when such silk is not being used for the production of silk fabrics exported from India. If at any stage imported raw silk is needed to be used for re-export after fabrication, full draw back on duty may be allowed but concessional rates of duty on the plea that such silk is needed for export or for substitution of exported textiles are not justified.*

13.3. It was also brought to our notice that any change in the price structure of imported silk has a strong impact on the silk market in the country. The West Bengal Government has informed us that after the import duty on raw silk was reduced from 50 per cent *ad valorem* to 30 per cent *ad valorem* in March 1969 the price of filature silk manufactured at Malda plummeted from Rs. 200 per Kg. to Rs. 170 per Kg. The price of charkha and cottage basin silk also fell down. This had an adverse effect on silk production. The representative of Mysore Government also informed us during the public inquiry that when the import duty was reduced the market became depressed, the rates for filature fell to a very low level and the Mysore Government was obliged to retain stock over a long period and yet the market did not improve. On account of this fall in price alone the Mysore Government filatures had to suffer a huge loss of many lacs of rupees. This shows that although imports of raw silk were small as compared to indigenous production, the variation in rate of duty had a strong influence on the local market. According to the current import policy an exporter of natural silk fabrics is entitled to import raw silk upto 40 per cent of the f.o.b. value of his exports or upto 23 per cent if he avails five per cent towards dyes and chemicals and 12 per cent towards polyester film required in the manufacture of metallic yarn. Import entitlements for raw silk against export for silk fabrics were meant to provide the necessary incentive for export. However, it has been observed that imports have progressively declined and constituted less than two per cent of the total availability of silk in 1968. Such a small addition to the indigenous production is neither conducive to greater export of silk fabrics nor does it make any substantial addition

to indigenous availability. However, owing to the large disparity between indigenous and international prices and the sensitiveness of the silk market such imports had the effect of depressing the indigenous market which greatly needs to be stabilised and supported particularly since more than 60 per cent of the silk is produced by the poorer sections of the community in charkhas. Exports of silk fabrics during the first six months of 1969 have already reached about rupees five crores and may go upto rupees ten crores during the whole year. At present exporters of silk fabrics are mostly utilising the export entitlements, for the import of dyes and other chemicals. If they decide, however, to import raw silk in large quantities there will be a sudden glut of imported silk in India and the indigenous industry, specially the filature industry, will face a very severe crisis. In order to avoid any such situation, we feel that it would be better to give incentives to exporters in some other form instead of allowing them to import raw silk to the extent of 40 per cent of the f.o.b. value of exports. In this context we would also like to suggest that *since prices of imported silk have a great impact on the domestic market imports and distribution of imported raw silk should be canalised through State Trading Corporation or Central Silk Board in order to avoid any sudden fluctuation in the domestic prices.* This will have a sober effect on the indigenous industry and will also reduce the high profits earned by importers and dealers of raw silk.

14.1. Export Assistance :

In July 1964 Government permitted exporters of mulberry and tasar silk fabrics, readymade garments and made-up articles of silk

14. Export Assistance and Replenishment Entitlements to import raw silk themselves directly against entitlements earned by them on exports effected on or after July 1st 1964. In January 1966 the scheme was

further liberalised with a view to stimulating exports of tasar fabrics and readymade garments. Since devaluation registered exporters are being allowed to import raw silk against their entitlement earned against the export of silk fabrics under the policy of liberalised imports. Under the current policy for registered exporters all the natural silk fabrics containing more than 50 per cent of the mulberry are entitled to receive import replenishments to the extent of 40 per cent of the f.o.b. value subject to a ceiling price of Rs. 25 per sq. metre. It entitles the exporters to import raw silk/noil yarn or nep noil yarn, dyes and chemicals of permissible categories and polyester film. The tasar silk fabrics which come under the category of natural silk fabrics containing less than 50 per cent of mulberry silk by weight are entitled to 10 per cent replenishment licences if the fabrics contained metallic yarn or only 5 per cent if the fabrics do not contain metallic yarn.

14.2.1. Exports:

Since the last inquiry the export of both mulberry fabrics and tasar fabrics has continued to show an upward trend as may be seen from the following table :—

Table No. 14.1

Export of fabrics

(Figures in lakhs)

It is a significant to note that the exports of tasar fabrics have shown a phenomenal increase during the last years. Export of mulberry fabrics continued to show an increasing trend during last three years. Total exports of silk fabrics during the first six months have reached a figure of Rs. 4.84 crores which indicates that exports may exceed Rs. 9 crores during the year.

14.2.2. Export of mulberry silk fabrics :

An important feature of the export trade of mulberry silk has been the shift from traditional countries to non-traditional countries. Upto 1960 traditional markets for India's silk were Ceylon, Singapore, Malaya and East African countries. However since then exports started shifting to non-traditional markets like U.S.A., U.K., West Germany and other European countries and the percentage share of exports of mulberry silk fabrics in non-traditional markets increased from 38 per cent in 1960 to more than 80 per cent in 1968. A statement showing country wise break up to exports of mulberry silk fabrics is given in Appendix 8. The below table gives the break-up of exports to traditional markets and non-traditional markets.

Table No. 14.2
Export to traditional and non-traditional markets

(Value in lakh Rs.)

Year	Traditional markets	% to Total	Non-traditional markets	% to Total	Total	
					Total	Total
1966	53.17	24	169.10	76	222.27	
1967	48.64	17	239.29	83	287.93	
1968	74.44	18	343.77	82	418.21	

14.2.3. Variety-wise exports of mulberry silk fabrics during last three years are given below :—

Table No. 14.3

Exports by variety of fabrics

(Qty. in lakh sq. mts. Value in lakhs Rs.)

Variety	1966			1967			1968		
	Qty.	Value	%	Qty.	Value	%	Qty.	Value	%
Dress materials	7.53	113.85		51.2	8.80	157.97	54.9	10.14	192.30
Scarves & Stoles	5.64	50.20		22.6	4.42	55.04	19.1	9.30	109.40
Sarces	3.45	40.39		18.3	2.36	38.89	13.5	4.13	62.84
Readymade garments	0.60	14.92		6.7	1.73	32.00	11.1	1.95	47.46
Ties	0.11	2.27		1.0	0.16	3.82	1.3	0.17	4.75
Others	0.02	0.44		0.2	0.01	0.21	0.1	0.04	1.46
									0.4

Note.—Conversion into sq. metres has been made according to set formulae of the Central Silk Board.

14.2.4. Export of Tasar silk fabrics :

Exports of tasar silk fabrics which were in the range of about Rs. 50 lakhs in 1966 and 1967 rose to a peak level of Rs. 1.32 crores in 1968. We understand that this performance is due to the diversion of exports from U.S.A. to the West Germany, Sweden and Japan. The following table indicates the exports of tasar silk fabrics to important countries :—

Table No. 14.4
Export of Tasar fabrics

(Figures in lakh Rs.)

Country	1966	1967	1968
West Germany	5.54	11.75	30.24
Sweden	0.80	4.98	29.47
Japan	2.47	10.96	26.00
U.S.A.	26.77	16.23	15.97
Hongkong	4.83	1.83	5.09
Australia	0.71	2.40	4.12
Denmark	0.22	0.77	4.01
Canada	1.92	2.43	3.78
Switzerland	0.66	0.43	3.31
U.K.	0.84	0.59	2.55
France	0.14	0.45	2.35
Others	1.25	1.36	5.06
TOTAL	46.15	54.18	131.95

15.1 The protected items of silk and silk products are covered by item Nos. 46, 46(1), 47 (a), 47 (b),

15. Import Duties

47 (c), 47(1), 48(b) and 48(c) of the I.C.T. Schedule. The current rates of import duties on these items are given below :—

Table No. 15.1

Rates of Import duty

Item No.	Name of articles	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	British colony	Burma	
1	2	3	4	5	6	7	8
*46	Silk, raw (excluding silk waste, noils & silk cocoons.)	Protective	50 per cent <i>ad valorem</i> plus Rs. 8.80 per kilogram.	..	10 per cent <i>ad valorem.</i>	December 31st, 1969.	
46(1)	Silk, waste and noils	Protective	50 per cent <i>ad valorem.</i>	..	10 per cent <i>ad valorem.</i>	December 31st, 1969.	
47	Silky yarn including thrown silk warps and yarn spun from silk waste or noils, but excluding sewing thread—						
(a)	Silk Yarn including thrown silk warps.	Protective	50 per cent <i>ad valorem</i> + Rs. 8.80 per kilogram.	..	..	10 per cent <i>ad valorem.</i>	December, 31st, 1969.

1	2	3	4	5	6	7	8
(b) Yarn spun silk was- te.	Protective	50 per cent <i>ad valorem</i> + Rs. 11.60 per kilogram.	..	..	10 per cent <i>ad valorem</i> .	December, 31st, 1969.	
(c) Yarn spun from noils	Protective	50 per cent <i>ad valorem</i>.	..	..	10 per cent <i>ad valorem</i> .	December, 31st, 1969.	
47(1) Silk sewing thread	Protective	50 per cent <i>ad valorem</i>.	..	..	10 per cent <i>ad valorem</i> .	December, 31st, 1969.	
48 Fabrics, not otherwise specified containing more than 90 per cent of silk including such fabrics embroidered—							
(a) Pongee	Protective	100 per cent <i>ad valorem</i> + Rs. 18.70 per kilo- gram.	..	..	..	December, 31st, 1969.	
(b) Fuji, Boekki and co- rded (excluding white cord).	Protective	100 per cent <i>ad valorem</i> + Rs. 18.70 per kilo- gram.	..	..	..	December, 31st, 1969.	
(c) Other sorts	Protective	100 per cent <i>ad valorem</i> + Rs. 13.80 per kilo- gram.	..	..	..	December, 31st, 1969.	

* The duty of raw silk however has been reduced to 30 per cent *ad valorem* under Notification No. 11(1)-Tar/67 dated 28th March, 1968.

15.2. In our last Report (1966) we had recommended that the then existing rates of protective duties on silk and silk products should be continued upto 31st December 1969 and Government accepted these recommendations. However, in March 1968, Government of India, announced through their notification No. 11(1)-Tar/67 dated 28-3-1968 that duty on raw silk falling under I.C.T. item No. 46 has become excessive for the purpose of securing protection intended to be afforded by it to similar articles manufactured in India and reduced the protective duty on raw silk from 50 per cent *ad valorem* plus Rs. 8.80 per kg. to 30 per cent *ad valorem* with immediate effect. There has been no change in rates of duties since then.

16. During the last inquiry we had taken the c.i.f. price of Japanese 20/22 denier reeled raw silk as Rs. 100.18 per kg. in connection with the present inquiry we have received **C. i. f. prices** the following information regarding c.i.f. prices of Japanese raw silk from the Central Silk Board.

Table No. 16.1

C. i. f. prices

	Rs. per kg.
1966 (June-Dec.)	139.17
1967	160.71
1968	146.61
1969—	
January	132.92
February	130.65
March	130.77
April	127.84
May	133.65
June	138.21
July	135.86

For the purposes of our present inquiry, we have taken the average c.i.f. prices for the seven months of 1969 which comes to Rs. 132.84 per kg.

17.1. In order to ascertain the quantum of disadvantage if any of the silk industry, we decided as in the past to restrict our costing **17. Commission's Estimates of cost of production and fair ex-works price** survey to filature units only. Apart from the fact that it is not possible to do any accurate or reliable costing of charkha units or cottage basins, the cost of production of either being comparatively lower

than that of filature units, we were of the opinion that no useful purpose would be served by collecting cost data for charkha units or cottage basins in as much as the quantum of protection if recommended for the filature units, would automatically cover the charkha units. Since filatures are mostly run by Government both in Mysore as well as in Jammu and Kashmir we decided to base our estimates on the costings of the units in Mysore. Details of costs of the selected filature units were obtained through the Central Silk Board and after necessary checking by our Cost Accounting Division, were used for estimation of future costs.

17.2. Units selected for costing.—We requested the Government to send us the complete cost data for the accounting year 1967-68 in our prescribed proforma for the following three filature units, which were selected for costing namely :—

- (i) Government Silk Filature, Kollegal,
- (ii) Government Silk Filature, Mysore and
- (iii) Government Silk Filature, Kanakapura.

Of the three units selected we had undertaken cost examination of the unit at Kollegal on the occasion of the previous investigation also.

17.3. Estimates of costs and fair ex-works prices.—On the basis of information made available to us by the Government of Mysore, we have framed the estimates of costs for the next three years and the ex-works fair prices work out as follows :

Table No. 17.1
Estimate of costs and fair ex-works prices

	Denier of Raw Silk : 20/22 Rs. per kg.			
	Unit No. 1	Unit No. 2	Unit No. 3	Weighted average
1. Cost of Cocoons . . .	135.89	134.51	119.85	132.19
Less credit for silk waste, etc. . .	11.17	14.63	14.27	13.41
Net Material costs . . .	124.72	119.88	105.58	118.78
2. Conversion costs . . .	42.92	48.67	39.11	44.94
3. Packing costs . . .	0.12	0.14	0.17	0.14
4. Cost of production . . .	167.76	168.69	144.86	163.86
5. Return	14.31	10.62	12.94	12.29
6. Fair ex-works price . . .	182.07	179.31	157.80	176.15
Production estimated . . .	35,000	50,000	19,900	

17.4. Raw Material.—In our previous estimates we had estimated the cost of cocoons at Kollegal at Rs. 5.17 per kg. This, however, went upto Rs. 7.23 per kg. during 1968-69. For the purpose of future estimates, net raw material cost has been kept at the same level *i.e.* Rs. 7.23 per kg. Similarly for the other two units *viz.*, Government Silk Filature, Mysore and Government Silk Filature at Kanakapura, cost of cocoons has been taken at the latest average rates of 1968-69, *viz.*, Rs. 6.75 and Rs. 7.09 per kg. respectively. Transport cost at Kanakapura during 1968-69 was 12 paise per kg. compared to about Three paise at Mysore.

17.5. Other charges.—The average number of basins worked has been taken at about 85 per cent for both Kollegal and Mysore units. But, for Kanakapura, this has been adopted at about 72 per cent, as achieved during 1968-69. Production per basin day has been adopted at the same level as obtained in 1968-69 *viz.* 512 gms, 381 gms and 377 gms for the three units. Average number of workmen per basin has been taken at 2.6 for Kollegal, 2.5 for Mysore and 1.8 for Kanakapura. Keeping the efficiency factor at 1968-69 (Actual) level, adjustments have been made for normal annual increments for workers and establishment. Suitable adjustment has also been made for fluctuations in the price factor. No addition to existing assets has been admitted. Depreciation has been calculated at normal income-tax rate on written down value. Packing cost has been allowed at the same level as obtained during the actual period.

17.6. Return.—As was done during the previous inquiry, return has been allowed at 15 per cent on the employed capital, taking the working at three months cost of production excluding depreciation. This also takes into account the present higher rate of bank charges and the minimum bonus payable to the industrial workers.

18.1. For the purpose of determining the quantum of protection, we have related the estimated fair ex-works price of indigenous raw

18. Comparison of landed cost of imported silk with international imported c.i.f. price without duty for 20/22 deniers. The table below shows the raw silk with estimated fair ex-works c.i.f. price and the difference in the fair ex-works prices of indigenous raw silk.

Table No. 18

C. i. f. prices and the difference in the fair price of indigenous raw silk

	Rs./kg.
1. C. i. f. price of imported 20/22 denier raw silk (average for 7 months of 1969)	132.80
2. Clearing charges	0.50
3. Landed cost without duty	133.30
4. Average fair ex-works price of indigenous raw silk	176.15
5. Difference between landed cost without duty and fair ex-works price	(—) 42.85
6. Difference as a percentage of c.i.f.	(—) 32.27

19.1. The industry was first protected in 1934 and has since been enjoying protection. One may well ask why should the industry continue to need protection even after 35 years of shelter. Such a question may admit of a ready reply in the case of other technologically based industries whose raw material is obtained by metallurgical or industrial processes. But it is difficult to give the answer in the case of an industry such as sericulture, the raw material of which cannot be produced in the assembly line or at an organised centre. When transition from primitive forms of reeling to organised filature occurred equivalent changes were also needed in the methods of production of cocoons in order to evolve a complementary standard of efficiency and yield compatible with the needs of an industrial process. These were in fact introduced in Japan which is the chief raw silk producing country as also in other sericulturally advanced countries. But unfortunately this did not happen in India and the method of production of cocoons as well as that of about 75 per cent of the silk continue still to be primitive. These are consequently not only labour intensive but also extremely unremunerative with the result that primitive tribes or the poorest sections of the community engage themselves in it and their product is neither uniform nor of a quality comparable to what is generally accepted in the international market as standard. The Indian silk industry cannot therefore compete in the international market, unless the raw material structure of the industry is also geared to a system which may match that of the drawing of silk through filatures.

19.2. It has been observed already that at the level of the production of mulberry leaves our disadvantage in comparison to Japan is five fold. This is reflected also in cocoon production which with the same land and labour is two and a half times more in Japan than in India. In the matter of renditta again the disadvantage of the Indian industry is three and a half times. Adding these factors together the Japanese advantage is six times over the Indian industry. Japan produces 56 per cent of the world's raw silk whereas India's contribution is only five per cent. Japanese silk is of such superior and uniform quality that even at the exorbitant price of Rs. 300 per kg. in the Banaras market it is preferred to filature silk priced at about half the amount for the weaving of expensive fabrics or even as warp for moderately priced items. This enormous disadvantage of the industry in India has continued because of lack of attention to progress and refinement in the production of raw material. Had the necessary attention been paid to it, the industry would have today grown to a stature where protection may no longer have been necessary. For, it has been accepted all round that India can produce as good univoltine silk as Japan or any other country.

19.3. Another question that needs also to be asked is whether or not protection has thwarted initiative by eliminating competition. We must, before considering the desirability or otherwise of recommending extension of protection find an answer to this question also. It appears to us that competition may have been conducive to the better working of filatures but it cannot be claimed that it would have improved production of better mulberry leaves or cocoons. On the other hand we apprehend that if the industry had been subjected to the full blast of foreign competition it may have disappeared as in the case of some other countries which found it unremunerative to continue with the production of raw silk such as France and Italy. If the industry is to survive and develop it will be necessary to continue protection as long as mulberry cultivation and production of cocoons do not come upto recognised norms.

19.4. As explained in paragraph 18, comparison of c.i.f. prices and estimated future fair-ex-works price indicates that the measure of protection required for raw silk would be 32 per cent *ad valorem*. Protection today does not have the same connotation as it had at the time when the industry was first protected or even upto the middle of the nineteen fifties. Severe quantitative restrictions on imports have been imposed since 1955 and raw silk has been placed on the banned list from 1965. The tariff rate is thus operative only in respect of the quantities which are permitted to be imported under export promotion schemes or under other similar measures. Since there is no likelihood in the foreseeable future of free imports of items

like raw silk, being allowed, the protection afforded in the form of protective duties will be operative in respect of the permitted imports only. If the quantum of these imports is small the rate of tariff duty is unlikely to have any effect on the indigenous industry. On the other hand, if the imports permitted for one reason or the other are substantial, the international prices being lower and the quality being much superior to that of the indigenous raw silk industry, the latter is likely to be adversely affected.

19.5. There is an additional factor which operates in the case of this industry and that is the sensitiveness of the consumer demand. Silk yarn is priced at more than 12 times the levels of cotton and cellulosic yarn which form the large bulk of textile fibres produced. Synthetic yarn constitutes 0.5 per cent of the total production and is priced at almost one-third that of silk. The market for silk is therefore confined to an exclusive and highly sophisticated sector; the prices being already much higher than those of other textile fibres, there is always an eagerness to secure reduction and an even greater degree of resistance against increase. In the two major silk producing States of India, i.e. Mysore and West Bengal there was a severe adverse effect on the market when the duty was reduced from 50 to 30 per cent *ad valorem* in March 1968 even before any substantial imports at this concessional rate could materialise and the market suffered a slump in both the States.

19.6. Taking all relevant factors into consideration we have come to the conclusion that the industry needs to be given protection at least for a further period of five years and that intensive efforts should in the meantime be made to improve the production and quality of mulberry leaves and cocoons, and that evaluation of this progress should continue to be made at biennial intervals. The quantum of protection needed is of the order of 32 per cent. We would suggest the continuance of protection of the items referred to in paragraph 15 of the Report for a further period of five years at the existing rates. To keep a watch on the progress of the industry review enquiries may be held every alternate year. It is worth repeating that protection alone will not lead to improvement of standards and performance. Government and institutional assistance are abundantly needed for this purpose.

Our conclusions and recommendations are summarised below :

20. Summary of conclusions and recommendations

(1) The total area under mulberry cultivation increased from 58,788 hectares in 1951 to 93,283 hectares in 1968, showing an annual growth rate of about three per cent over this period.

(Paragraph 8.6)

(2) Between 1952 and 1963 the cost of production of mulberry leaves increased by 25 per cent, while in the course of the last five years it went up by more than 117 per cent. We draw the attention of the Central Silk Board as well as of the concerned State Governments to this alarming development and recommend that ways and means may be explored to bring down the cost of leaves.

(Paragraph 8.6.1.)

(3) Since the district of Dehra Dun in Uttar Pradesh is heavily forested, it would be desirable to undertake mulberry plantation in the forest areas where rearing operations can be conducted in order to provide plentiful supply of leaves to rearers. A planned silvicultural project for mulberry plantation is bound to yield good results and thereby increase the production of mulberry silk manifold.

(Paragraph 8.6.8)

(4) Mysore which is the major silk producing State in the country continues to register a very low average yield in the rainfed area at the highest cost.

(Paragraph 8.6.10)

(5) The Indian sericulture industry has to improve its performance six fold in order to reach Japanese standards. As a first step, irrigation facilities need to be introduced for all mulberry cultivation. Attention may also be given to the nutritive content of mulberry leaves to ensure healthy growth of worms and reduction in wastage by mortality.

(Paragraph 8.6.11)

(6) We strongly recommend that the basic principle that all laying must be tested should be implemented. We therefore suggest that State Government of West Bengal may also enact suitable legislation to ensure that the seed producing grainages are licensed and adequately equipped for testing layings.

(Paragraph 8.7.6)

(7) The main reason for the reduction in number of layings used in Jammu & Kashmir is said to be the general decline of sericulture in that State. Therefore urgent attention should be devoted to the solution of the problem of the sericulture industry in that State.

(Paragraph 8.7.7)

(8) The cocoon production per kg. of seed in Mysore in 1967 was higher by about 55 per cent and 88 per cent than that in West Bengal and Jammu & Kashmir respectively.

(Paragraph 8.7.9)

(9) The quantity of mulberry raw silk produced in the country by all the three processes was about 15.0 lakh kgs. in 1966, 16.7 lakh kgs. in 1967 and 17.5 lakh kgs. in 1968. Production of non-mulberry silk in these years was 5.4 lakh kgs., 5.6 lakh kgs. and 5.7 lakh kgs. respectively.

(Paragraphs 8.10.1, 8.10.22)

(10) We are inclined to agree with the conclusions reached by the Filature Committee and would strongly recommend that the problem be tackled at the basic level of production of mulberry leaves and cocoons.

(Paragraph 8.10.19)

(11) We would reiterate the recommendations made by us on the last occasion and sound a note of warning that unless effective steps are taken to rejuvenate the industry in Jammu & Kashmir the industry may disappear from this State in the next ten years.

(Paragraph 8.10.21)

(12) The production of silk-waste of all types was of the order of 9.14 lakh kgs. in 1966 which increased to 9.68 lakh kgs. in 1967 and fell slightly to 9.65 lakh kgs. in 1968. Exports accounted for 70 per cent, 67 per cent and 57 per cent respectively.

(Paragraphs 8.11.1 and 8.11.13)

(13) As spun silk yarn has substantial export potential, it is advantageous to convert internally all the available silk waste and then export it. We therefore suggest an early review of the existing export policy in this matter and would also recommend further augmentation of installed spinning capacity if this becomes necessary for the purpose.

(Paragraph 8.11.6)

(14) With the increase in the production of synthetic fibres, it would be desirable to discourage internal consumption of silk and develop exports to the largest possible extent. Internal use of substitutes may be encouraged to the extent necessary.

(Paragraph 9.9)

(15) We recommend that the filatures may join the I.S.I. Certification Marking Scheme.

(Paragraph 10.1)

(16) The quality of raw silk instead of improving appears to have deteriorated since our last inquiry. It is difficult to understand why steps were not taken to equip properly the testing houses particularly when large sums are available for the purpose to research institutions and the Central Silk Board. We hope this serious shortcoming will be removed urgently so that testing may be rendered scientifically correct and acceptable.

(Paragraph 10.4)

(17) If at any stage imported raw silk is needed to be used for re-export after fabrication, full draw-back on duty may be allowed. Concessional rates of duty on the plea that such silk is needed for export or for substitution of exported textiles would, however, not be justified.

(Paragraph 13.2)

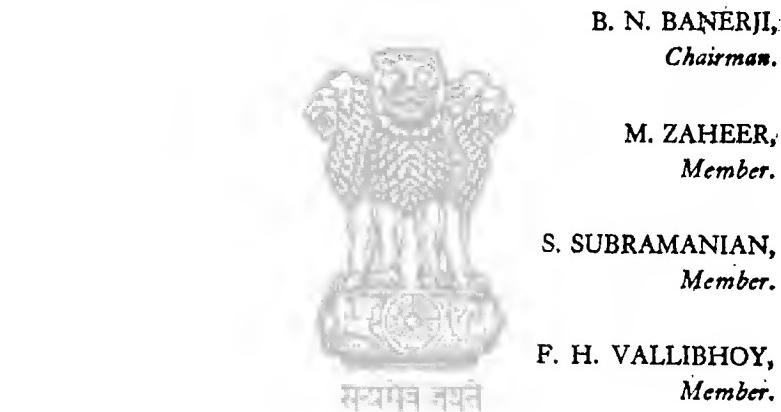
(18) Since prices of imported silk have a great impact on the domestic market, in order to avoid sudden fluctuations in the domestic prices, it is suggested that imports and distribution of imported raw silk should be canalised through State Trading Corporation or the Central Silk Board.

(Paragraph 13.3)

(19) For the reasons stated we recommend the continuance of protection to the sericulture industry for a further period of five years at the existing rates on the items mentioned in paragraph 15 of the Report, with a view to keeping a watch on the progress of the industry, we also suggest that review enquiries may be held every alternate year.

(Paragraph 19.6)

We wish to express our thanks to the various individuals, independent experts, associations of dealers, marketing society, consumers and importers and the concerned Central and State Government Departments for furnishing to us detailed information in connection with this inquiry and to all their representatives who gave evidence before us. Our thanks are also due to the Chairman, Vice-Chairman, Members, Secretary and other officers of the Central Silk Board for their valuable assistance at various stages of the inquiry.



P. V. Gunishastri,
Secretary.

Bombay :
26th September, 1969

APPENDIX I

(*Vide Paragraph 4.1*)

List of firms/bodies/associations to whom the Commission's questionnaires or letters were issued

*Indicates those who replied or submitted memoranda.

@Indicates those who were not interested.

A. PRODUCERS

I. Mulberry Cultivators/Graineurs/Rearers of Silkworm :

1. Assistant Director of Industries, (Seri),
Hosur, Dharmapuri Dist.,
Tamil Nadu.
2. Development Officer (Seri),
Industries Dept.,
Government of Madhya Pradesh,
Bilaspur, Dhar Dist.,
Madhya Pradesh.
3. Silk Centre,
Maharashtra Khadi & Village Industries Board,
Wai, Near Poona.
Satara Distt. (Maharashtra).
4. Government Mulberry Nursery, (for Graft Plantation),
Kanya,
Near Channapatna P.O. (Mysore State).
5. central Silkworm Seed Station,
Lakha, P.B. No. 15,
P. O. Raigarh,
Madhya Pradesh.

6. Government Tasar Seed Farm,
Ghargoda,
Raigarh Dist. (Madhya Pradesh).
7. Government Muga Farm,
Khanapara,
Near Gauhati, (Assam).
8. Central Silkworm Seed Station,
Pampore, P.O. Pampore,
Srinagar (Jammu & Kashmir).
9. Basic Seed Farm,
J. & K. Industries Ltd.,
Mirgund P.O.,
Srinagar.
10. Government Hill Rearing Station,
B. R. Hills,
Chamaraja Nagar Taluka,
Mysore State.
11. Foreign Race Seed Station,
Kalimpong,
Darjeeling Dist.,
West Bengal.
12. Government Nursery,
Matigara, Near Siliguri,
West Bengal.
13. Foreign Race Seed Farm,
Chamaraja Nagar P.O.,
Mysore State.
14. Basic Seed Farm for Multivoltine,
Bilidevalaya, P.O. *Kunnigel*,
Mysore State.

15. Government Grainage,
Srinagar,
(Jammu & Kashmir).
16. Government Grainage,
Batote,
(Jammu & Kashmir).
17. Government Crossbreed Grainage,
Berikai,
Hosur Taluk, Darmapuri Dist.,
Tamil Nadu.
18. Government Silk Farm,
Hindupur, (Anantapur Dist.),
Andhra Pradesh.
19. Central Graft Nursery,
Miragund, Srinagar,
(Jammu & Kashmir).
20. Mulberry Graft Nursery,
Quasigund, Srinagar,
(Jammu & Kashmir).
21. Government Nursery,
Jamu Tawi,
(Jammu & Kashmir).
22. Central Silk Farm,
Yashwantsagar,
Indore, (Madhya Pradesh).
23. Government Silk Farm,
Hosur,
Salem, Distt. (Madras State).
24. Central Silk Farm,
Chingmeirong,
Manipur.

25. Central Silk Farm,
Kollegal, (Mysore State).
26. Government Silk Farm,
Channapatna, Mysore.
27. Government Silk Farm,
Mugur, Mysore
28. Government Silk Farm,
Mysore.
29. Central Silk Farm,
Kudige, (Coorg Distt.)
Mysore.
30. Government Silk Farm,
Hindalge, Belgaum Distt.,
Mysore.
31. Central Nursery,
Sujanpur,
(Gurdaspur Distt.)
Punjab.
32. Central Silk Farm,
Mukerian,
(Hoshiarpur Distt.),
Via Pathankot, (Punjab)
- *33. Central Silk Farm,
Premnagar,
Dehradun,
(U.P.).
34. Government Nursery,
Beldanga,
Kumarpur (Near Berhampore),
(West Bengal).
35. Government Nursery,
Berhampore,
(West Bengal).

36. Government Nursery,
Piasbari,
Malda (West Bengal).
37. Government Nursery,
Matigara,
Near Siliguri,
(West Bengal).
38. Government Nursery,
Kursoong,
Darjeeling Distt.,
(West Bengal).
39. Multivoltine Seed Farm,
Dapalpur,
(Madhya Pradesh).
40. Basic Seed Farm,
Bidadi,
Mysore.
41. Basic Seed Farm,
Kunigal,
Mysore.
42. Basic Seed Farm,
Dodballapur,
Mysore.
43. Government Silk Farm,
Shillong,
(Assam).
44. Basic Seed Farm,
Udhampur,
(Jammu & Kashmir).

- *45. Foreign Race Seed Station,
 (Hill Rearing),
 Kalimpong,
 (West Bengal).
46. Central Grainage,
 Hindupur, (A.P.).
47. Government Grainages,
 Srinagar, (Jammu & Kashmir).
48. Government Grainages,
 Achabal, (Jammu & Kashmir).
- *49. Government Cross Breed Grainage,
 Barikai Hosur Taluk,
 Salem Distt., (Madras State).
50. Government Grainage,
 Kanakapura,
 Mysore.
- *51. Government Grainage,
 Chintamani,
 Mysore.
- *52. Government Grainage,
 Devanhalli,
 Mysore.
53. Government Grainage,
 Magadi,
 Mysore.
- *54. Government Grainage,
 Sugganhalli,
 Mysore.

- 55. Government Grainage,
Doddaballapur,
Mysore.
56. Central Grainage,
Kollegal,
Mysore.
57. Government Grainage,
Holdwani,
Uttar Pradesh.
58. Government Grainage,
Matigar,
West Bengal.
59. Government Grainage,
Piasbari,
West Bengal.
60. Shri M. N. Nanjundiah,
Licensed Seed Preparer,
President, Mysore State Licensed Seed
Preparers' Association,
Mugur,
Mysore State.
61. Shri A. R. Srinivasa Iyengar,
Licensed Seed Preparer,
General Secretary, Mysore State Licensed Seed Preparers'
Association
T-Narasipur, Mysore State.
62. T. S. Ranga Rao,
Licensed Seed Preparer,
Secretary, Mysore Division Seed Preparers' Association,
T-Narasipur, Mysore State.
63. Shri S. N. Thapasappa,
Licensed Seed,
Secretary, Mysore Division Seed Preparers' Association,
Bosakote, Bangalore District.

- *64. Shri G. S. Deva Dass,
 Licensed Preparer,
 Secretary, Channapatna Division,
 Licensed Seed Preparers' Association,
 Maddur, Mysore State.
65. Shri B. A. Keshavamurthy,
 Licensed Seed Preparer,
 Secretary, Chamarajanagar, Division Licensed Seed Preparers'
 Association,
 Chamarajanagar,
 Mysore State.
66. Shri T. G. Seshagiri Rao,
 Licensed Seed Preparer,
 T-Narasipur,
 Mysore State.
67. K. Siddegowda,
 Licensed Seed Preparer,
 Kanakapura,
 Mysore State.
68. Shri M. Munegowda, 
 Licensed Seed Preparer,
 Anur, Sidlaghatta Taluk,
 Kolar, Mysore State.
69. Shri H. D. Nanjappa, B. Sc.,
 Licensed Seed Preparer,
 Silk Merchant,
 Treasurer, Mysore State Licensed Seed Preparers' Association,
 Chikkaballapur, Mysore State.
70. Shri Dewegowda,
 Sericulturist,
 Kamkerai,
 Kollegal.

71. Divisional Sericulture Officer, (Ha),
Palampur, (Kangra).
72. Shri V. N. Siddaiah, (President),
Sericulturists' Cooperative Society Ltd.,
Vandaraguppa, Channapatna, P.O.
(Bangalore Dist.) Mysore State.
73. Shri S. Muniraju, M.L.A. & Member, Central Silk Board,
Advocate, Chikkaballapur,
(Kolar District), Mysore State.
74. Shri B. V. Narayana Swamy,
Sericulturist,
Handiganala, Sidlaghatta Taluk,
Kolar Dist., Mysore State.
75. Shri D. Narayana Swamy,
Sericulturist,
Devanahalli,
Bangalore Distt.,
Mysore State.
76. Shri B. Venkatarayappa, M.L.A.,
Bhaktarahalli,
Sidlaghatta Taluk,
Kolar Distt., Mysore State.
77. Shri Venkate Gowda,
Taluk Board President,
~~Devanahalli~~,
Bangalore Dist., Mysore State.
78. Shri Gundu Rao,
Sericulturist & Taluk Board Member,
Herur, Near Kunnigal,
Tumkur Distt., Mysore State.

79. Shri B. Abdul Kareem,
Sericulturist,
Kempahalli,
Post Kunnigal Taluk,
Mysore State.
80. Shri P. Veerappa,
Member Taluk Development Board,
Bhaktarahalli, Sidlaghatta Taluk,
Kolar Distt., Mysore State.
81. Shri Y. C. Bajjappa,
Sericulturist,
P.O. Devanahalli, Bangalore District,
Mysore State.
82. Shri Vasant Yeshwant Gurar,
At—Kavathe Ekand Tal—Tusgaon,
Distt. Sangli.
83. Talanki Gurappa Setty,
12, Lakshminarasimhiah,
Silk Koti, Avenue Road,
Bangalore-2.
84. S. Puttabosappa, Silk Worm Rearer,
Dugahatty Village,
Honnur Post,
Yelandur Taluk,
Mysore District.
85. K. B. Jayadovappa, Gundlupet,
Mysore District,
Mysore State.

II. Producers of Raw Silk (Reelers) :

Filatures :

1. General Manager,
Government Silk Filatures,
Mysore.

- *2. Chairman,
Kisan Silk Industries,
Mellur, Sidlaghatta Taluk,
Mysore State.
3. Managing Agents,
Karnataka Silk Filatures,
Vesvesvrapuram,
Bangalore-2.
4. Government Silk Factory,
Srinagar.
- *5. U.P. Resham Audyogik Sarakari Sangh Ltd.,
Premnagar,
Dehra Dun, (U.P.).
- *6. Government Silk Filatures,
Kollegal,
Mysore State.
- *7. Government Silk Filatures,
Kanakpura,
Mysore State.
8. The Secretary,
Reelers' Co-operative Society,
Talavady, (Madras State).
9. Government Silk Filatures,
Malda. (West Bengal).
10. Mispa Silk Filatures,
Kamagare, (Kollegal Taluk),
Mysore State.
11. Shri Syed Abdul Majeed,
Tajmahal Silk Filature,
Sidlaghatta Town,
(Kolar Dist.),
Mysore State.

12. Shri S. R. Sen,
Director of Production,
Abhoy Ashram,
P.O. Birati,
Calcutta-5.
13. Shri M. Syed Dastagir,
Yasmin Silk Filature,
Sidlaghatta Town (Kolar Distt.),
Mysore State.

III. Charka and Cottage Basins :

1. Kanaka Silk Industries,
Kanakapura,
Mysore State.
2. Shri Mahadewa Silk Industries,
Mudigundam, (Kollegal Taluk),
Mysore State.
3. Mispa Silk Filatures,
Kannakarai, (Kollegal Taluk),
Mysore State.
4. Shri G. L. Ramachandra Rao,
Domestic Basin Owner,
Ikkadahalli, (Kollegal Taluk),
Mysore State.
5. Swastic Silk Industries,
Kanakapura, (Mysore State)
6. Shri Ali Raochegowda,
Surapuram (Kollegal Taluk),
Mysore State.
7. Shri Mantayya, Charka Reeler,
Mamballi, (Yelundar Taluk),
Mysore State.

8. Shri Md. Iassan Ali Chodhry,
Atagama, District Malda,
West Bengal.
9. Shri S. K. Multan,
P.O. Dakhin Lakshmpur,
Village Imamjagir, (Distt. Malda),
West Bengal.
10. Shri Nasiruddin Biswa,
Village & P.O. Sujapur,
Malda, West Bengal.
11. Shri Bijan Kumar Chattarji,
(P.O. Village Kamarpur),
(Murshidabad District) U.P.
12. Shri Haji Amin Munshi Filature,
Kaiachaka. (Malda),
West Bengal.
13. Shri Satheswar Hazra, Barisa,
P.O. Bagnasar, (Manipur Distt.),
West Bengal.
14. Shri Badu Mondal,
Village Ray Gram,
P.O. Amriti, (Distt. Malda),
West Bengal.
15. Shri Tamisuddin Sheikh,
P.O. Beldanga, Murshidabad, Distt.,
(U.P.)
16. Talnki Gurappa Setty,
K. Lakshminarasimhaiah Silk Koti,
Avenue Road,
Bangalore-2.

17. Abdul Rub,
Silk & General Merchant,
M. G. Road,
Chintamani,
Kolar Distt. (Mysore).
18. The Superintendent of Sericulture,
Reelers Co-operative Society,
Kamarpur, (Berhampore),
West Bengal.
19. Shri Chote Sahib,
Cottage Basin Reeling Unit,
Ramanagaram, (Mysore State),
Mysore.
20. M/s. Abdul Khaliq,
Silk Merchant,
Ramanagaram,
Mysore.
21. M/s. Gafar Qureshi,
Silk Merchant,
Ramanagaram,
Mysore.
22. M/s. Basheer Ahmed Agha,
C/o. Syed Peer Agha,
Silk Merchant,
Ramanagaram,
Mysore.
23. Handloom Weavers Co-operative Societies Union,
Nathnagar,
Uttar Pradesh.

IV. Spinning Units :

Spun Silk Mills.

1. Government Spun Mills,
Channapatna,
Mysore State.
- *2. Assam Spun Silk Mills Ltd.,
Jagi Road,
Nowgong, Assam.
3. M/s. Eastern Silk Mfg. Co. (Pvt.) Ltd.,
9, Jagmohan Mullick Lane,
Calcutta-7.
4. Shri S. O. Zatakia,
Globe Fabrics,
Modern Mansion,
67, Hughes Road,
Bombay-7.
5. Shri L. P. Gupta,
Indian Textiles,
Great Eastern Hotel,
Arcade,
Calcutta.

V. Silk Throwing and/or Twisting Factories :

1. Shri Shanmugha Twisting Factory,
Prof. M/s. Badra Shetty & Sons,
Hosur, (Salem Distt.).
2. Kanchipur Silk Twisting Factory,
Kanchipuram.
3. Shri Lakshmi Silk Twisting Factory,
A R N I.

4. M/s. Mangalambika Silk Twisting Factory,
18, Andiappa Mudaliar Street,
Mumbakonam.
5. P.S.S. Bommania Chettia & Sons,
Gugai, Salem-1.
6. Talanki Gurappa Setty,
K. Lakshminarasimhiah,
Silk Koti,
Avenue Road,
Bangalore-2.
7. M/s. Muddiah & Sons,
Saurashtra Pet,
Bangalore City.
8. Shri Lakshmi Venkateshwara,
Silk Throwing Factory,
Narasimraja Road,
Bangalore City.
- *9. Government Silk Filature,
Twisting Section,
Kollegal, Mysore State.
- *10. M/s. Kabadi Chinagusa Factory,
(Silk Throwing),
Bangalore City.
11. M/s. Dhanamal Silk Mills,
Surat.
12. M/s. Rambansi Silk Mills,
Manufacturers of Spun Silk Fabrics,
Bhagalpur, Bihar.
- *13. Government Silk Institute,
Nathanagar,
Bhagalpur, Bihar.

14. M/s. Suresh Silk Industries,
Manufacturers of Spun Silk Fabrics,
Wankaney, Saurashtra.
- *15. S. Dhondusa Gold Thread Factory,
Subedar Chatram Road,
Bangalore-9.
16. M/s. Seethalakshmi Textiles,
Nagarthpet,
Bangalore.
- *17. M/s. Srinivasa Silk Throwing Factory,
6, Mission Road,
Bangalore.
18. M/s. Rajlakshmi Textile,
Mysore Road,
Bangalore.
- *19. M/s. Chammudi Textiles,
Ramnagaram,
Mysore.
20. M/s. Bangalore Woollen Cotton & Silk Mills Ltd.,
23, Agraaharam Road,
Bangalore-23.
21. Mysore Government Silk Weaving Factory,
Manathody Road,
Mysore.
22. M/s. Hanuman Silk Weaving Factory,
Chickpet,
Bangalore.
23. Government Silk Weaving Factory,
Rajbagh,
Srinagar,
(Jammu & Kashmir).

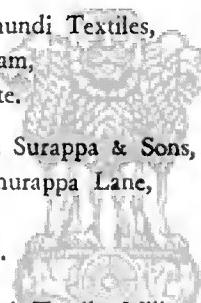
24. M/s. Kapoor & Co.,
Srinagar,
Jammu & Kashmir.
25. Kashmir Silk Mills,
Dehra Dun,
Uttar Pradesh.
- *26. The Bangalore Silk Mills,
97, Masjid Bunder Road,
Mandvi P.O.
Box No. 3218,
Bombay-3.
27. M/s. Khoday Eswarsa & Sons,
9, Seshadri Road,
Bangalore-9.
28. Kabadi Sankarsa & Sons,
74, Rangaswamy Temple Street,
Bangalore-2.
- *29. M/s. Gowri Shanker Silk Weaving Factory,
18, Choulagath,
Bangalore-2.

VI. Importers/Dealers :

- *1. M/s. Nagindas Foolchand Chinai,
79, Masjid Bunder Road,
Mandvi P.O. Box No. 3218,
Bombay-3.
2. Harilal Bhikabhai & Sons,
Temple Bar Building,
147, M. G. Road,
Bombay-1.

VII. Manufacturers of Silk Fabrics :

1. Ghanta Hutchanna,
13th Cross Road,
Near Nandi Motor Service,
Cubbonpet, Bangalore City.
2. Shri Budal Mudranagappa & Sons,
Kavadi Revanna Steyepet,
Bangalore-2.
3. Silk Handloom Weavers' Co-operative Society,
Kancheepuram,
Madras State.
4. Shri Murgappa Mudaliar,
Silk Cloth Manufacturers,
Kancheepuram,
Madras State.
5. M/s. P.S.S. Bommanna Chettiar & sons,
Cloth Merchants, Gugai, Salem,
Madras State.
6. M/s. Thammanna Chettiar & Sons,
Bhoomi Street, Gugai, Salem,
(Salem District), Madras State.
7. M/s. Kunjilal & Co.,
Lakhichotra,
Banaras.
8. Silk Manufacturing Sahakari Samathi Ltd.,
Mandnapore,
Banaras.
9. Silk Manufacturing Federation Lakhiji Chantra.
Banaras.

10. Shri P. C. Patnaik,
Poor Cottage Industries,
Cuttack,
Orissa.
11. M/s. Bangalore Woollen Cotton & Silk Mills Ltd.,
Agraharan Road,
Bangalore-2.
12. M/s. Seethalakshmi Textiles,
Magarthapet,
Bangalore-2.
13. M/s. Chamundi Textiles,
Ramanagaram,
Mysore State.
14. M/s. V. T. Surappa & Sons,
G-39, Honnurappa Lane,
Cubbonpet,
Bangalore-2.
15. M/s. Pravati Textile Mills,
P.O. Panibatti, 
24-Parganas,
Calcutta.
16. M/s. S. S. Bagchi & Co.,
P.O. Berhampore,
(West Bengal).
17. M/s. India Textiles Ltd.,
Great Eastern Hotel,
Calcutta.
18. Government Silk Weaving Factory,
Rajabagh Srinagar,
(Jammu & Kashmir).

19. Artex Mills,
Srinagar,
(Jammu & Kashmir).
20. Government Silk Institute,
Nathanagar,
P.O. Bhagalpur,
Bihar.
21. Rambansi Silk Mills,
Bhagalpur.
22. M/s. Kasetty Rangappa & Sons,
Dharmavaram, (Anantapur Dist.),
Andhra.
23. Soalkuchi Resham Sambaya Ltd.,
Soalkuchi P.O. District Kamrup,
Assam.
- *24. Assam Co-operative Silk House Ltd.,
Govinda, Taroon, P.O. Gauhati,
Assam.
25. Resham Silpi Sangha,
12/18 & 14 Hare Street,
Calcutta-1.
- @26. M/s. Sree Silk Mills,
Maldahiya,
Banaras.
27. Training-Cum-Production Centre Textiles,
Chanderi (M.P.).
28. M/s. Dhanamal Silk Mills,
Manohar Mansion,
Dhobi Talao,
Bombay.

29. M/s. Ichharam Ramchand,
Navpura, Gelwadi,
Surat.
30. M/s. Dhendusa Gold Thread Factory,
Subbedar Chatram Road,
Bangalore-9.
31. M/s. D. Arasappa & Sons,
Sri Narasimharaja Road,
Bangalore-2.
32. M/s. T. K. Krishnaswamy Chettiar,
P.B. No. 6, Komarapalayam,
Via Bhavani,
Erode (S. Rly.).
33. M/s. Radha Silk Emporium,
14, Sannadhi Street,
Mylapore, Madras-4.
34. M/s. Raja S. Venkatachalapathi Iyer & Sons,
46, West Street,
Kumbakonam.
35. M/s. Muddiah & Sons,
Sowrashttrapet,
Bangalore-2.
36. Talanki Gruappa Setty,
K. Lakshminarasimhiah Silk Koti,
Avenue Road,
Bangalore-2.
37. A. M. Veerabhadraiah & Bros.,
Handloom Silk Cloth Manufacturer,
New Street, Kollegal.
38. Raparti Silk Weavers Co-operative Society,
Raparti.

39. U.P. Industrial Co-operative Association,
Varanasi,
Uttar Pradesh.
40. The Assam Co-operative Silk House Ltd.,
Gauhati,
Assam.
41. M/s. Dhondesa Gold Thread Factory,
Subedar Chatram Road,
Bangalore City.
42. M/s. Seethalakshmi Textiles,
Nagarhpet,
Bangalore.
43. M/s. Srinivasa Silk Throwing Factory,
6, Mission Road,
Bangalore.
44. M/s. Janardhna Silk House,
1-15, Jamima Masjid Road,
Bangalore-2.
45. M/s. Rajlakshmi Textiles,
Mysore Road,
Bangalore.
46. M/s. Chammundi Textiles,
Ramanagaram,
Mysore.
- *47. Mysore Government Silk Weaving Factory,
Manathody Road,
Mysore.
48. M/s. Hanuman Silk Weaving Factory,
Chickpet,
Bangalore.

49. Government Silk Weaving Factory,
Rajbagh, Srinagar,
Jammu & Kashmir.
50. M/s. Kappor & Co.,
Srinagar,
Jammu & Kashmir.
51. M/s. Kashmir Silk Mills,
Dehradun.
Uttar Pradesh.
52. Secretary,
All India Handloom Fabrics Marketing Co-operative
Society,
Janmabhoomi Chambers,
Fort Street,
Bombay-1.
53. M/s. Shrinivasa Textiles,
Narasimha Raja Road,
Bangalore-2.
- 53A. Manohara Reshame Mothai Karkhane,
Maddur.

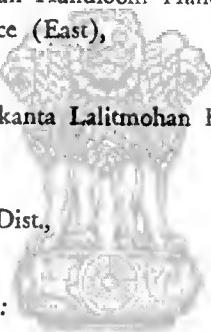
VIII. Silk Weaving Factories :

- @54. M/s. Mysore State Handloom Weavers' Co-operative
Society Ltd.,
Bangalore-2.
55. M/s. Raja Silk House,
Basavaraja Market,
Post Box No. 709,
Bangalore-2.
56. M/s. Suvarna Silk House,
65, Huriopet,
Bangalore-2.

57. M/s. Kabadichikknagusa & Sons,
36. Telugupet,
Bangalore-2.
58. M/s. Silk Handloom Weavers Co-operative,
Shiranbagh,
Srinagar (Kashmir).
59. M/s. Indian Art Palace,
Phatak Sukhlal Sahu,
Post Box No. 42,
Varanasi (U.P.).
60. Shri B. N. Mahboob Khan,
Silk Reeler & Silkwaste Dealer,
Jaimahal Silk Filature,
Sidlaghatta Town,
Kollar Distt.,
Mysore State.
61. Fancy Dyeing & Printing Works,
Sadhwara Street,
Farrukhabad,
(Uttar Pradesh).
62. M/s. Indian Textiles Co. (Pvt.) Ltd.,
Great Eastern Hotel Arcade,
Calcutta.
63. M/s. Eastern Silk Mfg., Co. Pvt. Ltd.,
9, Jagmohan Mullick Lane,
Calcutta-7.
64. M/s. Radha Silk Emporium,
C/o Bombay Swadesh Co-operative Stores,
Western Indian House,
Sir P. M. Road,
Bombay-1.

65. M/s. Bihar Textiles,
Bangalore-2.
66. M/s. Rambhansi Silk Mills,
Bhagalpur-2.
67. M/s. Congaram Sriram,
Champa (M.P.).
68. M.P. States Tribal Co-operative Development Corpn.,
116, Chinch Bunder,
Bombay-9.
69. M/s. Hindustan Handloom Handicrafts,
11, Govt. Place (East),
Calcutta-1.
70. M/s. Chandrakanta Lalitmohan Resham Khadi Samity,
P.O. Khagra,
Berhampore,
Murshidabad Dist.,
West Bengal.

IX. Research Institutes :

1. The Director, 
Central Sericultural Research Station,
Berhampore (West Bengal).
- *2. The Director, Central Sericultural Research and Training Institute,
Santhi Vilas, Nazarbad,
Mysore-1.
- *3. The Director,
Regional Sericultural Research Station,
Titabar (Assam).
- *4. The Director,
Central Tasar Research Institute,
Ranchi (Bihar).

5. Silk & Art Silk Mills Research Association,
"SASMIRA", Dr. Annie Besant Road,
Worli, Bombay-18.

X. Associations :

1. Indian Silk Association,
13-N, Connaught Circus,
New Delhi-1.
2. The Mysore Silk Handloom Weavers' Association,
13, Jammu Masjid Road,
Bangalore-2.
3. The Bihar Chamber of Commerce,
Patna.
4. The Bhagalpur Silk Mills Owners' Association,
Bhagalpur (Bihar).
5. Hindpur Silk Reelers Association,
Hindpur.
6. The Mysore Chamber of Commerce,
Bangalore.
7. The Mysore Silk Association,
C/o The Government Silk Conditioning and Testing House,
Asiatic Bldg.,
Gandhinagar, Bangalore-9.
8. The Mysore Raw Silk Merchants' Association,
Resham Mahal,
Kempe Gowda Road Cross,
Bangalore-2.
9. The Secretary,
Weavers Co-operative Producers' Society Ltd.,
Iiker.

10. The Surat Chamber of Commerce.
Safe Deposit Chambers,
Surat.
11. Murshidabad Silk Association,
Murshidabad.
12. Jangipore Silk Association,
Murshidabad.
13. Jalapur Silk Research Organisation,
Sujapura, Malda,
(West Bengal).
14. Fatchami Silkworm Reelers' Organisation,
Sujapura, Malda,
(West Bengal).
15. Kolar Division Charkha Reelers' Association,
Sidlaghatta, Kolar District,
(Mysore State).
16. Banaras Industrial & Trade Association,
Chowk, Varanasi.
17. M/s. Coimbatore Devanga Weavers' Co-operative Society
Ltd.,
15/193, Oppanakkara Street,
Coimbatore-1.
18. M/s. Cambay Sadi Manufacturers' Co-operative Society,
Rana Chakla, Cambay,
Gujarat.
19. M/s. Banarsi Cloth Merchants Chambers,
Lakhichowtra,
Varanasi.
20. M/s. Bankar Sahakari Samithi Maryadit,
Chanderi (M.P.).

21. M/s. Surat District Industrial Association Ltd.,
98, Sadadiwala Market Baranpur,
Bhogol,
Surat.
22. M/s. Kancheepuram Silk Weavers' Co-operative Production & Sales Society, Ltd.,
443, Gandhi Road,
Kancheepuram (Madras).
23. Mysore State Handloom Weavers' Central Co-operative Society,
Near Sampangi Tank, P.B., No. 45,
Bangalore.
24. M/s. Raw Silk Merchants' Association,
39, Abdink Rehman Street,
Bombay-3.
- *25. The Surat Jari Merchants' Association,
Safe Deposit Chambers,
Surat.
26. Shri Bhagwandas Sarda,
Secretary,
Spinners, Rellers & Weavers,
Bishanpur, S.E. Rly.,
Bankura.
27. Shri G. Rajappa,
President,
Silk Reelers' Association,
Mudigundum,
Mysore State.

XI. State Governments :

- *1. The Director of Sericulture & Weaving
Government of Assam,
Shillong.

2. Secretary to the Government of Tamil Nadu
Department of Industries,
Labour & Co-operation,
Fort St. George, Madras,
Tamil Nadu.
- *3. Secretary to the Government of Punjab.
Industries Department,
Chandigarh.

The Director of Industries,
Govt. of West Bengal,
New Secretariat Building,
9th Floor, Kiron Sankar Road,
Calcutta.
- *5. The Secretary to the Government of Madhya Pradesh,
Agriculture Department,
Civil Secretariat, Bhopal
6. The Secretary to the Government of Kerala
Industries (E) Department,
Trivandrum.
7. The Secretary to the Government of Maharashtra.
Industries & Labour Department,
Sachivalaya,
Bombay-32.
8. The Secretary to the Government of Andhra Pradesh,
Industries Department,
Hyderabad.
- @9. Assistant Secretary to the Government of Rajasthan,
Industries & Mines Department,
Jaipur.
- *10. The Director of Industries,
Government of Bihar,
Department for Industries and Technical Education,
Patna.

11. The Director of Industries,
Uttar Pradesh,
Kanpur.
12. The Secretary to the Government of Mysore,
Commerce & Industries Department,
Bangalore.
13. The Secretary to the Government of Himachal Pradesh
Industries & Supplies Department,
Simla.
14. The Secretary to the Government of Jammu & Kashmir,
General Department,
(Political Section),
Srinagar.
- *15. The Secretary,
Tripura Administration,
Department of Industries,
Agartala.
- *16. Director of Sericulture,
Govt. of Mysore, Bangalore,
Mysore State.
17. Secretary to the Govt. of Orissa,
Department of Industries, Mining and Geology,
Bhubaneshwar.
18. Director of Industries,
Manipur.
19. The Secretary to the Govt. of Haryana,
Dept. of Haryana,
Chandigarh.
- *20. Secretary to the Govt. of Nagaland,
Department of Industries.
Imphal.

XII. Central Government Depts./others :

(a) Central Govt. Departments :

1. The Secretary,
Central Silk Board,
95-B, Marine Drive,
Bombay-2.
- *2. The Textile Commissioner,
New C.G.O. Building,
New Marine Lines,
Bombay-1.
3. The Secretary,
All India Handloom Board,
New C.G.O. Building,
New Marine Lines, Bombay-1.
4. The Chief Executive Officer,
Khadi & Village Industries Commission,
Kurla, Bombay-56.
5. The Director,
Indian Standards Institution,
Manak Bhavan,
Mathura Road,
New Delhi.

(b) Others :

- *1. The Handicraft & Handloom Exports Corporation of India Ltd.,
Lok Kalyan Bhavan,
11-A, Rouse Avenue Lane,
New Delhi.
- @2. The State Trading Corporation of India Ltd.,
Express Building.
Mathura Road,
New Delhi.

APPENDIX 2

[*Vide* paragraph 4.1.]

*List of persons who attended the Commission's public inquiry on
22nd August 1969*

A. Producers :

1. Shri G. Muniyappa . Representing The Kisan Silk Industries (Pvt.) Ltd., Mysore.

B. State Government Deptt. :

1. Shri D. R. Gunduraj . Representing Govt. of Mysore, Bangalore.

2. Dr. D. C. Sircar . Do. Govt. of West Bengal, Calcutta.

3. Shri J. N. Barthakur . Do. Govt. of Assam, Shillong.

4. „ S. N. Hussain . Do. Govt. of Bihar, Patna.

5. „ K. Tirumurthy . Do. Govt. of Tamil Nadu, Madras.

6. „ J. C. Sharma . Do. Govt. of Himachal Pradesh, Simla.

7. „ C. M. Barthawal . Do. Govt. of U. P., Kanpur.

C. Importers :

Shri B. M. Chinai . } Representing M/s. Nagindas Foolchand Chinai, Bombay.
„ M. Trivedi . }

„ R. Shah . } Do. M/s. Harilal Bhikhahai & Sons, Bombay.
„ K. Shah . }

„ Wishwanath Khursija . Do. M/s. Pokharmal Wishwanath, Bombay.

D. Consumers/Consumer's Associations :

Shri Abdul Samad . Representing Mysore State Marketing Co-operative Society Ltd., Bangalore.

E. Research Institutes/Associations :

Dr. V. R. Trivedi	Representing	Silk and Art Silk Mills Research Association, Bombay.
Dr. M. S. Jolly	Do.	Central Tasar Research Station, Ranchi.

F. Central Government Departments :

Shri Mahabir Dass .	Representing	Central Silk Board, Bombay.
,, M. Subba Rao		
,, S. R. Ullal .		
,, A. S. R. Gopalachar		
,, D. V. Lele .	Do.	Khadi and Village Industries Commission, Bombay.
,, G. S. Abhayankar .	Do.	Indian Standards Institution, New Delhi.
,, H. N. Satyanarayana .	Do.	Handloom Board and Textile Commissioner, Bombay.
,, C. D. N. Nicholas .	Do.	Handicrafts and Handlooms Export Corporation of India Ltd., New Delhi.

APPENDIX 3

[Vide paragraph 8.6]

Statement showing area under mulberry cultivation and number of trees used for rearing

State	Area under Mulberry cultiva- tion (Hectares)		Number of Trees (Thousands)			
	1966	1967	1968	1966	1967	1968
Andhra Pradesh	393	491	475
Assam	960	970	850
Bihar	..	126	129	138	5	5
Jammu & Kashmir	2,200	2,200
Madhya Pradesh	..	200	250	300	Nil	Nil
Mysore	..	78,000	78,500	83,800	6	8
Punjab	120	95
Tamil Nadu	..	1,555	1,578	1,772	..	..
Uttar Pradesh	..	109	111	109	65	66
West Bengal	..	6,496	5,911	5,566	584	504
Himachal Pradesh	120	122
Manipur	150	110	153	120
Total	..	87,989	88,880	93,293	4,076	3,936
						3,668

Figures for Andhra Pradesh and Jammu & Kashmir are based on data furnished by the Central Silk Board. The rest have been taken from replies of State Government.

APPENDIX 4

[Vide paragraph 8.10.1]

State-wise Production of Mulberry Raw silk

(in Rs.)

State	FILATURE SILK				COTTAGE BASIN SILK		CHARKHA SILK		
	1966	1967	1968	1969	1967	1968	1966	1967	1968
Andhra Pradesh	362	..	..	..	127	..	131	..	40
Assam	..	..	..	..	..	..	15,800	16,220	16,100
Bihar	..	..	..	..	..	..	682	781	..
Jammu & Kashmir	75,154	67,584	47,439	..	..	..	..	..	..
Madhya Pradesh	..	..	..	..	346	586	458	..	..
Tamil Nadu	..	..	..	..	651	995	566	1,252	2,952
Mysore	1,05,4071	27,321	1,32,745	2,93,490	4,57,000	4,17,000	6,80,639	6,84,000	8,33,148
Punjab	412	..	..	..	266	292	401	720	1,145
Uttar Pradesh	2,493	2,761	2,583	3	..	..	264	..	..
West Bengal	723	3,605	1,962	29,549	22,234	18,605	2,79,760	2,65,059	2,47,989
Himachal Pradesh	169	..	1,057	..	271	..	..	..	..
Manipur	..	..	..	..	72	12	34	328	53
Tripura	..	..	..	..	6	5	8	..	..
Total	1,84,720	2,01,271	1,84,891	3,23,284	4,81,524	4,37,072	9,79,576	9,70,204	11,01,248

APPENDIX 4—(Concl)

State-wise Production of Mulberry Raw Silk

State	DUPION SILK ..			*TOTAL		
	1966	1967	1968	1966	1967	1968
Andhra Pradesh	..	..	..	493	127	48
Assam	..	..	..	15,800	16,220	16,100
Bihar	..	..	..	682	781	..
Jammu & Kashmir	366	248	258	75,520	66,832	47,697
Madhya Pradesh	..	..	..	946	588	458
Tamil Nadu	15	3	11	1,918	3,950	2,777
MPore	14,091	15,622	23,208	10,93,537	12,83,943	14,06,101
Punjab	..	..	..	1,398	1,437	2,118
Uttar Pradesh	218	459	332	2,978	3,220	2,920
West Bengal	..	..	..	3,09,023	2,90,882	2,67,696
Himachal Pradesh	..	10	8	169	281	1,065
Manipur	..	12	4	11	412	69
Tripura	..	..	..	6	5	8
Total	14,702	16,346	23,828	13,02,152	16,68,345	17,47,039

*Provisional

APPENDIX 5

[Vide paragraph 8.10.22]

State-wise Production of Non-Mulberry Silk

(UNIT : KG.)

State	TASSAR			ERI			MUGA			TOTAL		
	1966	1967	1968	1966	1967	1968	1966	1967	1968	1966	1967	1968
Andhra Pradesh	880	376	..	47	12	..	69,000	68,000	69,000	70,200	2,63,000	2,65,875
Assam	..	..	..	1,95,000	1,96,875	2,02,500	..	..	..	..	2,72,700	..
Bihar	1,16,818	1,07,636	1,26,726	6,590	8,561	1,000	..	..	..	..	1,23,408	1,16,197
Madhya Pradesh	1,30,000	1,48,000	1,35,000	..	..	..	..	..	..	..	1,30,000	1,48,000
Maharashtra	1,290	1,384	..	..	..	..	..	..	..	..	1,290	1,384
Orissa	7,500	15,500	21,000	..	..	20	..	..	..	..	7,500	15,500
Uttar Pradesh	27	115	30	80	93	..	..	..	..	..	87	208
West Bengal	11,555	7,927	6,950	4,950	5,262	7,404	..	..	..	..	16,505	13,189
Manipur	..	..	..	590	226	426	4	..	..	3	594	226
Tripura	..	..	..	605	400	330	..	..	..	605	400	330
Total	2,68,070	2,80,938	2,89,706	2,07,842	2,11,429	2,11,680	68,004	69,000	70,203	5,43,916	5,61,367	5,71,589

*Provisional figures for 1968.

APPENDIX 6

[Vide paragraph 8.11.2]

State-wise Production of Mulberry Silk-waste

(In Kg.)

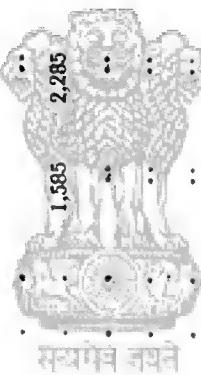
State	FILATURE			COTTAGE BASIN			CHARKHA		
	1966	1967	1968	1966	1967	1968	1966	1967	1968
Andhra Pradesh	203	..	..	..	65	23	100	..	..
Assam	..	..	..	..	..	..	7,000	7,000	7,000
Bihar	..	..	..	..	..	..	682	781	237
Jammu & Kashmir	55,127	48,285	34,096	..	..	..	..	..	..
Madhya Pradesh	..	..	..	235	319	370	..	..	..
Tamil Nadu	..	..	..	233	304	170	..	842	75
MP	56,735	81,612	83,000	1,24,900	2,05,000	1,46,000	2,29,000	2,16,000	2,74,000
Punjab	220	..	..	108	143	148	288	384	384
Uttar Pradesh	1,698	2,041	2,839	6	..	..	78	..	..
West Bengal	383	2,400	89	32,379	13,822	13,092	1,42,256	1,38,414	1,52,672
Himachal Pradesh	49	..	328	..	108	..	..	2	..
Manipur	..	..	..	9	2	4	12	1	..
Tripura	..	..	..	..	4	3	1	1	..
Total	1,14,415	1,34,338	1,20,354	1,56,970	2,19,772	2,76,800	3,79,416	3,63,425	4,34,368

*Provisional figures for 1968.

APPENDIX 6—[Contd.]

State-wise Production of Mulberry Silk waste

I	State	DUPION				TOTAL		
		1966	1967	1968	1966	1967	1968	1968
Andhra Pradesh	23
Assam	7,000	7,000
Bihar	632	781
Jammu & Kashmir	50,570	39,893
Madhya Pradesh	235	319
Mizoram	4,09,795	5,02,612
Tamil Nadu	233	1,146
Punjab	616	532
Uttar Pradesh	1,815	2,041
West Bengal	1,75,018	1,54,636
Himachal Pradesh	49	110
Manipur	21	3
Tripura	5
TOTAL	..	4,618	2,285	5,797	6,52,419	7,19,820	7,20,317	



APPENDIX 6—[Contd.]

State-wise Production of Non-Mulberry Silk-waste

(Unit : Kg.)

State	TASSAR		ERI		MUGA		TOTAL	
	1966	1967	1966	1967	1966	1967	1966	1967
Andhra Pradesh	592	189	491	58	11	27	..	650
Arunachal	..	..	65,000	65,625	67,500	23,000	22,000	89,000
Bihar	87,818	81,515	72,618	..	..	..	87,818	81,515
Madhya Pradesh	56,000	67,000	60,000	..	..	..	56,000	67,000
Maharashtra	643	570	570	..	..	..	643	570
Orissa	2,818	5,875	7,875	700	1,000	..	3,518	6,875
Uttar Pradesh	..	..	..	..	..	..	..	..
West Bengal	25,205	4,055	10,500	..	..	740	..	25,205
Manipur	..	..	..	..	9	11	2	..
Tripura	..	..	..	..	..	..	1	9
Total	1,73,076	1,59,204	1,52,954	63,767	66,647	68,268	23,000	25,001
								2,61,843
								2,47,851
								2,45,924

*Provisional figures for 1968.

APPENDIX 7

[Vide Paragraph 8.12.3]

*Expenditure in implementation of plan development schemes during
1965-66 (State-wise)*

(Rs. in lakhs)

State	No. of schemes	Allocation approved by the Working Group on Village & Small Industries	Expenditure for 1965-66
1. Andhra Pradesh	20	3.51	2.300
2. Assam	8	20.00	12.887
3. Bihar	19	16.16	11.492
4. Himachal Pradesh	7	1.91	0.810
5. Jammu & Kashmir	17	21.01	10.009
6. Kerala	1	0.44	0.250
7. Madhya Pradesh	20	10.42	8.020
8. Tamil Nadu	16	12.83	3.092
9. Maharashtra	1		N.R.
10. Manipur	11		0.452
11. Mysore	29	50.00	23.158
12. Orissa	8	4.23	1.357
13. Punjab	11	4.76	2.517
14. Uttar Pradesh	10	7.16	6.356
15. Tripura	6	0.76	0.534
16. West Bengal	15	17.84	5.522
TOTAL	199	171.03	88.756

N.R.- Not reported.

APPENDIX 7-(Contd.)

Statement showing the State-wise details of cost of the schemes approved by the Board and the expenditure incurred thereof during 1968-69.

(Rs. in lakhs)

Sl. No.	Name of the State	Working Group's Allocation	Approval conveyed by the Board		Expenditure reported ending March 1969
			No. of Provision	Expenditure	
1	Andhra Pradesh . . .	1.880	8	1.750	1.133
2	Assam . . .	16.800	11	12.283	4.221
3	Bihar . . .	7.000	10	7.000	2.407
4	Jammu & Kashmir . . .	34.400	13	29.120	10.592
5	Madhya Pradesh . . .	6.720	11	5.170	4.459
6	Mysore . . .	50.000	19	29.000	25.738
7	Orissa . . .	2.500	7	2.000	1.894
8	Punjab . . .	1.500	5	1.599	1.210
9	Tamil Nadu . . .	16.630	13	9.490	11.707
10	Uttar Pradesh . . .	5.540	5	5.452	4.806
11	West Bengal . . .	N.R.	16	8.430	5.60
12	Himachal Pradesh . . .	0.690	N.R.	N.R.	3.407
13	Manipur . . .	0.260	9	0.922	0.641
14	Tripura . . .	0.110	5	0.400	0.121
15	N. E. P. A. . .	N.R.	N.R.	N.R.	N.R.
16	Nagaland . . .	N.R.	N.R.	N.R.	N.R.
17	Delhi . . .	N.R.	1	0.079	Nil
	TOTAL . . .	144.030	135	106.695	77.957

*Expenditure up to end of December, 1968.

**Expenditure pertains to Kashmir only.

N.R.—Not reported

APPENDIX 8

[Vide paragraph 14.2.2]

Countrywise exports of mulberry silk fabrics

(Figs. in lakh Rs.)

Country	1966	1967	1968
U.S.A.	47.17	55.84	65.07
Sweden	26.75	43.72	51.42
France	9.84	13.62	43.72
West Germany	12.74	25.77	40.74
Malaysia	20.14	18.93	32.65
Japan	3.46	16.24	32.42
U.K.	13.17	15.36	24.86
Kenya	6.11	8.19	15.14
U.S.S.R.	18.46	14.37	13.95
Hong Kong	17.47	9.71	10.80
Finland	2.86	5.28	9.13
Australia	3.69	9.47	8.59
Denmark	5.29	5.71	8.08
Canada	4.92	10.89	7.38
Italy	6.	4.30	5.82
Others	23.39	30.13	48.44
TOTAL	222.27	287.93	418